Chapter 500: STORMWATER MANAGEMENT

SUMMARY: This chapter describes stormwater standards for activities licensed under the Stormwater Management Law and the Site Location of Development Law. It also describes license by rule standards for stormwater infiltration (Appendix D) adopted pursuant to the Waste Discharge Law.

1. **Introduction.** Land use activities can cause changes in stormwater flows. Many pollutants, such as nutrients and metals, attach to fine particles of soil from throughout the watershed. Soil and ~~other~~attached pollutants are carried in the stormwater down to a waterbody or wetland. A project is required to meet appropriate standards to prevent and control the release of pollutants to waterbodies, wetlands, and groundwater, and reduce impacts associated with increases and changes in flow.

2. **Applicability.** This chapter applies to~~(A)~~ a project that requires a stormwater permit pursuant to 38 M.R.S.A. § ~~420-D, (B)~~420-D; a development that may substantially affect the environment and requires a site location of development (Site Law) permit pursuant to 38 M.R.S.A. §§ 481 ~~- 490 and (C)~~ - 490; and certain projects that may be eligible for license by rule for the infiltration of stormwater pursuant to 38 M.R.S.A. § 413.

2. ~~3.~~ **Definitions**. The following terms have the following meanings as used in this chapter and chapter 502, unless the context otherwise indicates. "Lakes most at risk from new development" (lakes most at risk) and "urban impaired streams" are listed in chapter 502.

A. Certified erosion and sedimentation control professional. A professional certified by the International Erosion Control Association (IECA).

B. Compensation fee utilization plan. A plan that specifies how funds received as a compensation fee payment will be allocated to reduce the impact of stormwater pollution to an impaired water resource.

~~B.~~**C. Detention basin.** A basin designed and constructed to provide temporary storage of runoff to control stormwater outflow from the site and peak flow in receiving waters, and to provide gravity settling of pollutants.

~~C.~~**D. Developed area.** "Disturbed area" excluding areas that are returned to a condition with the same drainage patterns and vegetative cover type that existed prior to the disturbance. ~~Both~~An area is not considered developed if planting~~conducted~~ to restore the previous cover type and restoration of any altered drainage patterns~~must~~ occur within one calendar year of disturbance. "Same vegetative cover type" may include hydrologically improved cover type. For example, an area that was previously pasture may be replanted as forest.

~~D.~~**E. Direct watershed of a waterbody or wetland.** The land area that drains, via overland flow, natural or man-made drainage systems, or waterbodies or wetlands, to a given waterbody or wetland without first passing through an upstream waterbody classified as GPA.

~~E.~~**F. Disturbed area.** All land areas that are stripped, graded, grubbed, filled, or excavated at any time during the site preparation or removing vegetation for, or construction of, a project.

"Disturbed area" does not include routine maintenance, but does include re-development and new impervious areas. "Routine maintenance" is maintenance performed to maintain the original line and grade, hydraulic capacity, and original purpose of the facility. Paving impervious gravel surfaces while maintaining the original line and grade, hydraulic capacity and original purpose of the facility is considered routine maintenance. ~~Mere cutting~~Cutting of trees, without grubbing, stump removal, disturbance or exposure of soil is not considered "disturbed area".

A disturbed area continues to be considered as disturbed area if it meets the definition of "developed area" or "impervious area" following final stabilization .

~~F.~~G. **Drainageway.** A natural or man-made channel or course within which surface discharge of water may occur. Drainageways include, but are not limited to rivers, streams and brooks (whether intermittent or perennial), swales, ditches, pipes, culverts, and wetlands with localized discharge of water.

~~G.~~H. **Erosion and sedimentation control best management practices (erosion control BMPs).** Methods, techniques, designs, practices, and other means to control erosion and sedimentation, as approved or required by the department.

NOTE: For guidance, see "Maine Erosion and Sediment Control BMPs Maine Department of Environmental Protection."

I. **Erosion control mix.** A type of mulch that consists primarily of organic material such as shredded bark, stump grindings, composted bark, or fragmented wood generated as a by-product from log handling at wood mills. It includes a well-graded mixture of particle sizes with a mineral content that is less than 20% by weight, and is free from construction debris, refuse, and contaminants.

~~H.~~J. **High use parking lot**. A commercial or other parking lot with~~similar~~ size and usage characteristics similar to a commercial lot, ~~including~~such as a fast-food restaurant, factory, convenience store, high-turnover restaurant, shopping center, office complex, school, or supermarket.

K. **Impervious area.** The total area of a parcel that consists of buildings and associated constructed facilities or areas that will be covered with a low-permeability material, such as asphalt or concrete, and areas such as gravel roads and unpaved parking areas that will be compacted through design or use to reduce their permeability. Common impervious areas include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and macadam or other surfaces which similarly impede the natural infiltration of stormwater. A natural or man-made waterbody is not considered an impervious area, but is treated as an immediate runoff surface in curve number calculations.

~~J.~~L. **Infiltration.** Any process specifically used to meet all or part of the stormwater standards of this chapter by actively directing all or part of the stormwater into the soil. Infiltration is the process by which runoff percolates through the unsaturated overburden and fractured bedrock to the water table. For the purposes of this chapter, infiltration does not include:

(1) Incidental wetting of soil in ditches, detention basins or the equivalent;

(2) Wetting of underdrained basins, dry swales, or similar filtration systems; or
(3) Wetting of buffers meeting department requirements for use as stormwater control.

Discharge of runoff to areas of the site where the water will collect and percolate into the ground is considered infiltration if the volume, rate, or quality of the discharge exceeds the runoff capacity of the area, such as a stormwater treatment ~~buffers~~buffer, as determined by the department. ~~Underground~~Underdrained swales, underdrained ponds, and similar practices that discharge to surface waters or to buffer strips meeting department requirements for ~~quality or quantity treatment~~stormwater buffers are not considered infiltration systems, although these may be used to treat runoff prior to discharge to an infiltration area.

~~K.~~M. Lake or pond. (1) A great ~~pond;~~pond, or (2) a lake or pond of any size used as a public water supply~~, or (3) a small pond. A small pond is a natural pond less than 10 acres in size~~.

~~L.~~N. Linear project. A project consisting of a road, utility corridor, railroad track outside a yard or station, or similar facility where the impervious or developed area is proportionally much longer than it is wide, as determined by the department. Linear projects do not include golf courses or Site Law subdivisions and associated roads.

~~M.~~O. Major river segment. The rivers or portions of rivers identified as follows: Saco River; Androscoggin River; Kennebec River; West Branch Penobscot River below Elbow Lake; East Branch Penobscot River below Wassataquiok Stream; Piscataquis River below Dover-Foxcroft; St. Croix River below Grand Lake; Aroostook River below Ashland; and St. John River below the Allagash River.

~~N.~~P. Parcel. "Parcel" is defined the same as "parcel of land" in 06-096 CMR 371(1)(L).

~~O.~~Q. Peak flow. The greatest rate of flow in a drainageway, measured as volume per unit of time, resulting from a storm of specified frequency and duration.

~~P.~~ R. Person. An individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity. For purposes of an activity requiring review pursuant to the Site Law or Stormwater Management Law, "person" is further defined at 06-096 CMR ~~321(1)(M).~~371(1)(M).

~~Q.~~S. Practicable. Available and feasible considering cost, existing technology and logistics based on the overall purpose of the project.

T. Pre-development area. An impervious or developed area created prior to the effective date of the Stormwater Management Law for a stormwater project, or the effective date of the jurisdictional threshold under which a development is licensed for a Site Law development.

~~R.~~U. Protected natural resource. As defined in the Natural Resources Protection Act at 38 M.R.S.A. § 480-B. These resources are referred to as "wetlands and waterbodies".

~~S.~~V. Stormwater. The part of precipitation, including runoff from rain or melting ice and snow, that flows across the surface as sheet flow, shallow concentrated flow, or in drainageways.

W. Stream. A river, stream, or brook as defined in the Natural Resources Protection Act at 38 M.R.S.A. § 480-B.

~~T.~~**X. Subcatchment.** An area of ~~the~~a project site with a unique flow path to a specific point.

~~U.~~**Y. Two (ten, twenty-five)-year, 24-hour storm.** A precipitation event with a 50% (for two-year), 10% (for ten-year), or 4% (for 25-year) probability of being equaled or exceeded during any twenty-four hour period during any given year.

~~V.~~**Z. Watershed.** The land area that drains, via overland flow, drainageways, waterbodies, or wetlands to a given waterbody or wetland.

~~W.~~**AA. Wetlands.** Coastal and freshwater wetlands as defined in the Natural Resources Protection Act, 38 M.R.S.A. § 480-B.

4. Stormwater standards. This section describes the stormwater standards that apply to a project disturbing one acre or more. ~~More than one~~There are five categories of stormwater ~~treatment~~standards: basic, general, flooding, urban impaired stream, and other. More than one standard may apply to a project. In this situation, the stricter standard is applied as determined by the department. For example, a project may be located in a stream watershed, and the stream may drain to a lake. The standards for the particular stream and lake are compared, and the stricter standard is applied as determined by the department.

A. Basic standards

(1) When the basic standards must be met. A project disturbing one acre or more must meet the basic standards. Basic standards are specified in Appendices A, B, and C of this chapter and address erosion and sedimentation control, inspection and maintenance, and housekeeping, respectively.

~~(2)When a project must only meet basic standards.~~ A project need only meet basic standards, and therefore qualifies for a stormwater permit by rule (PBR) described in Section 7, if it results in one or more acres of disturbed area and the following.

(a) Lakes most at risk and urban impaired streams. Less than 20,000 square feet of impervious area and 5 acres of developed area in the direct watershed of a lake most at risk~~lake~~ or urban impaired stream; and

(b) All other watersheds. Less than one acre of impervious area and five acres of developed area in ~~all other watersheds.~~any other watershed.

(2) Grading or other construction activity. Grading or other construction activity on the site may not impede or otherwise alter drainageways to have an unreasonable adverse impact on a protected natural resource.

(3) Basic standards and infiltration. A project that must only meet basic standards, and therefore qualifyies for a stormwater permit by rule, and that uses infiltration to control runoff must~~either~~ meet the~~license by rule~~ standards in ~~Appendix D, or obtain a waste discharge license under the Waste Discharge Law.~~Section 4(B)(1)(a)(iii).

B.**General standards.** General standards consist of best management practice (BMP) standards,standards and phosphorus standards, and additional requirements for a project in an urban impaired stream watershed, which are applicable as describedbelow.

B. in this section. These standards apply as described below in addition to the basic standards described in Section 4(A).

(1) BMP standards

(1)When the best management practice (BMP)(a) When BMP standards must be met. A project disturbing one acre or more and resulting in any of the following is required tomust meet the BMP standards described below in Section (4)(B)(1)(b).
(4)(B)(3),in addition to the basic standards described in Section 4(A) above.

(a)(i) Urban impaired streams. 20,000 square feet or more of impervious area, or 5 acres or more of developed area, in the direct watershed of an urban impaired stream; or
(b)(ii) Other stream, coastal and freshwater wetland watersheds. One acre or more of impervious area, or 5 acres or more of developed area, in any other stream, coastal, or wetland watershed.

Some projects in lake watersheds have the option to meet this general standardBMP standards in lieu of the phosphorus standards as described in Section 4(B)(2)(a) below.

(2) When the phosphorus standards must be met (lake watersheds only). A project disturbing one acre or more and resulting in any of the following is required to meet the phosphorus standards in Section 4(B)(4), except as provided below, in addition to the basic standards described in Section 4(A) above.

(a) Lake most at risk watersheds. 20,000 square feet or more of impervious area, or 5 acres or more of developed area, in a lake most at risk watershed; or
(b) Any other lake watershed. Three acres or more of impervious area, or 5 acres or more of developed area, in any other lake watershed.

An applicant with a project described in (a) or (b) that includes less than three acres of impervious area and less than 5 acres of developed area may choose to meet the BMP standards (Section 4(3) below) rather than the phosphorus standards if the lake is not severely blooming. Severely blooming lakes are a subset of lakes most at risk as listed in Chapter 502.

(3) BMP standards. A(b) Description of BMP standards. To meet BMP standards, a project's stormwater management system must include treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. This must be achieved by using one or more of the following methods to control runoff from no less than 95% of the impervious area and no less than 80% of the developed area associated with a project. The department may, on a case-by-case basis, consider alternate treatment measures to those described in this section. An alternate treatment measure must provide at least as much pollutant

removal as the treatment measures listed below and, unless otherwise approved by the department, as much channel protection and temperature control.

NOTE: The department strongly encourages applicants to incorporate low-impact ~~design~~development (LID) measures where practicable. LID addresses avoidance of stormwater impacts by minimizing developed and impervious areas on the project site. LID project design considers the location of any protected natural resources, and maintaining natural drainage patterns and pre-construction time of concentration. If practicable, LID incorporates runoff storage measures dispersed uniformly throughout a site rather than single point collection of stormwater through conventional end-of-pipe structures.

~~(a) Detention.~~(i) Wetpond with detention above the permanent pool. A stormwater management system using detention to control runoff must detain, above a wetpond's permanent pool, a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's non-impervious developed area. The detained runoff must be discharged solely through an underdrained vegetated gravel ~~soil~~ filter having a single outlet with a diameter no greater than eight inches. A wetpond must have a storage volume below the permanent pool elevation at least equal to 1.5 inches times the subcatchment's impervious area plus 0.6 inch times the subcatchment's non-impervious developed area, a mean depth of at least three feet, and a length to width ratio of 2:1 or greater.

~~(b)~~(ii) Filter. A ~~stormwater management system~~detention structure using filters to control runoff must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's non-impervious developed area and discharge it solely through an underdrained vegetated soil filter having a single outlet with a diameter no greater than eight inches, or through a proprietary filter system approved by the department.

~~(c)~~(iii) Infiltration. A stormwater management system using infiltration to control runoff must retain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's non-impervious developed area and infiltrate this volume into the ground.

Pre-treatment of stormwater must occur prior to discharge to the infiltration area. The infiltration area must minimize discharge of soluble pollutants to groundwater, and must be maintained to assure that its capacity for infiltration and pollutant removal is unimpaired. An infiltration system serving a development regulated under the Site Location of Development Act may be required to meet additional standards.

Infiltration from a stormwater infiltration system is considered de minimus and does not require an individual waste discharge license if the standards in Appendix D are met. For definitions and provisions associated with the Waste Discharge program, see 38 M.R.S.A. §§ 413 et. seq., and chapter 520 et. seq. for waste discharge licensing concerns.

All drywells and subsurface fluid distribution systems must be registered with and meet all other requirements of the Department's Underground Injection Control Program.

~~(d)~~(iv) Buffers. A stormwater management system using buffers to control runoff must meet the design and sizing requirements described in Appendix F.

~~(e)~~(c) Exceptions from the BMP standards. A project is eligible for an exception from the general standards as follows.

~~(i) The runoff volume to each treatment measure described in Section 4(B)(3) above may be reduced by 25% for the following types of projects.~~

~~a) A linear project; or~~(i) Pretreatment measures.

~~b)~~ A project that includes measures to pretreat runoff to a filter or infiltration system in a department-approved, flow-through sedimentation~~device.~~

device may reduce the runoff volume to each treatment measure described in Section 4(B)(3) above by 25%.

(ii) Discharge to the ocean or a major river segment. A project discharging to the ocean or a major river segment and using a wetpond to meet the BMP standards is not required to incorporate storage above the wetpond's permanent pool or to install underdrain filters.

(iii) A linear ~~project may reduce the portion of the project needing runoff control~~portion of a project. For a linear portion of a project, runoff volume control may be reduced to no less than 75% of the volume from the impervious area and no less than 50% of the developed ~~area.~~area, or the runoff volume to each treatment measure described in Section 4(B)(1)(b) above may be reduced by 25%.

(iv) A utility corridor or portion of a utility corridor. A utility corridor or portion of a utility corridor that meets the following criteria is not required to meet BMP standards.

aa) The project or portion of the project does not include impervious area;
bb) Disturbed areas are restored to pre-construction contours and revegetated following construction;
cc) Mowing of the revegetated right–of-way occurs no more than once during any twelve month period; and
dd) A vegetation management plan for the project has been reviewed and approved by the department.

~~(4)~~(2) Phosphorus standards

(a) When the phosphorus standards must be met. The phosphorus standards apply only in lake watersheds. A project disturbing one acre or more and resulting in any of the following is required to meet the phosphorus standards described in Section 4(B)(2)(b) below.

(i) Lake most at risk watersheds. 20,000 square feet or more of impervious area, or 5 acres or more of developed area, in the direct watershed of a lake most at risk, except that an applicant with a project that includes less than three acres of impervious area

and less than 5 acres of developed area may choose to meet the BMP standards rather than the phosphorus standards if the lake is not severely blooming. Severely blooming lakes are a subset of lakes most at risk as listed in Chapter 502.

(ii) Any other lake watershed. Three acres or more of impervious area, or 5 acres or more of developed area, in any other lake watershed.

(b) Description of phosphorus standards. An allowable per-acre phosphorus allocation for each lake most at risk will be determined by the department. The department's determination is based upon ~~(i)~~ current water quality, ~~(ii)~~ potential for internal recycling of phosphorus, ~~(iii)~~ potential as a cold-water fishery, ~~(iv)~~ volume and flushing rate, and ~~(v)~~ projected growth in the watershed. This allocation will be used to determine phosphorus allocations for a project unless the applicant proposes an alternative per-acre phosphorus allocation that is approved by the department. If the project is a road in a subdivision, only 50% of the parcel's allocation may be applied to the road unless phosphorus export from both the road and the lots is subject to this chapter, in which case the entire allocation for the parcel may be applied.

NOTE: For guidance in calculating per-acre phosphorus allocations and in determining if stormwater phosphorus export from a project meets or exceeds the parcel's allocation, see "Phosphorus Control in Lake Watersheds: A Technical Guide for Evaluating New ~~Development, "~~Development", Maine Department of Environmental Protection.

C. Urban impaired stream standard. If required, the urban impaired stream standard applies in addition to the basic standards and general standards described in Sections 4(A) and (B).

(1) When the urban impaired stream standard must be met. If a project located within the direct watershed of urban impaired stream or stream segment listed in chapter 502 ~~(5) When additional requirements in an urban impaired stream watershed must be met. A project resulting~~results in three acres or more of impervious area or 20 acres or more of developed area, requires review pursuant to the Site Law, or is a modification of any size as described in ~~area that is located within the~~Section 16 of this chapter, the urban impaired stream standard must be met .

~~standards.~~ (2) Description of the urban impaired stream standard. In addition to meeting the basic and general standards, ~~the~~a project in the direct watershed of an urban impaired stream must pay a compensation fee or ~~perform off-site mitigation based on a project's non-roof impervious acreage and its acreage of roof and non-impervious developed area as defined below:~~
mitigate project impacts by treating, reducing or eliminating an off-site or on-site pre-development impervious stormwater source as described in

~~**Type of surface with or without required treatment**~~	~~**Required compensation fee or off-site mitigation credit**~~	
	~~**Compensation fee**~~	~~**Off-site mitigation credit**~~
~~Non-roof impervious area~~	~~$5,000.00 per acre~~	~~0.5 credits per acre~~
~~Roof~~	~~$2,000.00 per acre~~	~~0.2 credits per acre~~

Non-impervious developed area	$1,000.00 per acre	0.1 credits per acre

Compensation fees may only be used in watersheds where a compensation fee utilization plan has been approved by the department. If a compensation fee utilization plan is proposed by an applicant who is not a municipality, the applicant must demonstrate that the plan has been submitted to the municipality in which the project is located for review.

(a) Amount of credit. The following table indicates the amount of credit earned for a variety of allowed off-site mitigation activities:

Mitigation activity	**Source type**	**Credit earned**
Retrofit with BMP standards at 1/3 required sizing or with approved flow through sedimentation device	Road or high use parking lot	0.5 credit per acre treated
	Low use parking lot	0.3 credit per acre treated
	Roof or other impervious area	0.2 credit per acre treated
	Lawn	0.1 credit per acre treated
Retrofit with BMP standards at 2/3 required sizing	Road or high use parking lot	1.0 credit per acre treated
	Low use parking lot	0.6 credit per acre treated
	Roof or other impervious area	0.4 credit per acre treated
	Lawn	0.2 credit per acre treated
Retrofit with BMP standards at required sizing	Road or high use parking lot	1.5 credits per acre treated
	Low use parking lot	0.9 credit per acre treated
	Roof or other impervious area	0.6 credit per acre treated
	Lawn	0.3 credit per acre treated
Eliminate impervious source area, replace with lawn	Road or high use parking lot	1.0 credit per acre treated
	Low use parking lot	0.5 credit per acre treated
Eliminate impervious source area, replace with forest	Road or high use parking lot	2.0 credits per acre treated
	Low use parking lot	1.0 credit per acre treated
Retrofit detention with vegetated gravel under-drains	Impervious areas only	0.5 credit per acre treated

In addition to the use of off-site mitigation or compensation fees as described above, the department may approve other off-site or on-site mitigation measures on a case by case basis. Other measures proposed by an applicant must provide at least equivalent protection as measures described in the table above, as determined by the department.

(b) Location. The off-site mitigation activity must be located in the same watershed as the project to off-set the impact of the pollutant export from the project. More than one mitigation activity may be applied to a project.

(c)Reduction of standards for projects in watersheds with an approved watershed management plan. The department may waive or reduce requirements for compensation fees or mitigation (on-site or off-site) if the municipality in which the project is located has developed and is

~~implementing a watershed management plan for the watershed in which the project is located. The watershed management plan must be approved by the department as meeting the purpose of restoring water quality. For an area designated as a municipal growth zone under a state approved comprehensive plan, implementation of the watershed management plan may be deferred for up to five years, or until state or federal financial assistance is available, whichever comes first.~~ Section 6(A). Compensation fees must be paid to the department's compensation fund or to an organization authorized by the department pursuant to the Stormwater Management Law, 38 M.R.S.A. § 420-D(11).

~~C.~~**D.** **Flooding standard.** If required, the flooding standard applies in addition to the basic ~~standards and general~~standards, general standards, and urban impaired stream standards described in Sections ~~4(A) and (B).~~4(A), (B), and (C).

(1) When the flooding standard must be met. ~~A project resulting~~If a project results in three acres or more of impervious area or 20 acres or more of developed area, ~~or a project requiring~~requires review pursuant to the Site Law, ~~and subsequent modifications of any size, arerequired to meet the flooding standard.~~or is a modification of any size as described in Section 16 of this chapter, the flooding standard must be met. Stormwater management systems for these projects must detain, retain, or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year, and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project.

(2) Waiver of the flooding standard. A project is eligible for a waiver from the flooding standard as follows.

(a) Discharge to the ocean, a great pond, or a major river segment. A waiver is available for a project in the watershed of the ocean, a great pond, or a major river segment provided the applicant demonstrates that the project conveys stormwater exclusively in sheet flow, in a manmade open channel, or in a piped system directly into one of these resources. Prior to requesting a waiver as part of an application, the applicant shall secure drainage easements from any downstream property owners across whose property the runoff must flow to reach the ocean, great pond, or river. The applicant shall also demonstrate that any piped or open-channel system in which the runoff will flow has adequate capacity and stability to receive the project's runoff plus any off-site runoff also passing through the system.

(b) Insignificant increases in peak flow rates from a project site. When requesting a waiver for a project resulting in an insignificant increase in peak flow rates from a project site, the applicant shall demonstrate that insignificant increases in peak flow rates cannot be avoided by reasonable changes in project layout, density, and stormwater management design. The applicant shall also demonstrate that the proposed increases will not unreasonably increase the extent, frequency, or duration of flooding at downstream flow controls and conveyance structures or have an unreasonable adverse effect on protected natural resources. In making its determination to allow insignificant increases in peak flow rates, the department shall consider cumulative impacts. If additional information is required to make a determination concerning increased flow, the department may only consider an increase after the applicant agrees, pursuant to 38 M.R.S.A. § 344-B(3)(B), that the review period may be extended as necessary by the department.

(3) ~~Grading or other construction activity. Grading or other construction activity on the site may not impede or otherwise alter drainageways to:~~

~~(a) Have an unreasonable adverse impact on a protected natural resource;~~
~~(b) Flood an area of the parcel not specifically planned and designated for such flooding; or~~
~~(c) Flood an area of any other parcel unless an easement is obtained.~~

~~(4)~~ Channel limits and runoff areas. The design of piped or open channel systems must be based on a 10-year, 24-hour storm without overloading or flooding beyond channel limits, except when the piped system is overloaded to provide detention or retention of the stormwater. In addition, the areas expected to be flooded by runoff from a 10-year or 25-year, 24-hour storm must be designated in the application, and no buildings or other similar facilities may be planned within such areas. This does not preclude the use of parking areas, recreation areas, or similar areas from use for detention of storms greater than the 10-year, 24-hour storm. Runoff from the project may not flood the primary access road to the project and public roads as a result of a 25-year, 24-hour ~~storm or other storm, unless authorized by the municipality, MDOT, or MTA.~~storm.

~~D.~~E. **Easements and covenants.** If a project will require specific off-site areas for the control, disposal, or treatment of stormwater runoff, then these areas must be protected from alteration through easements or covenants according to the following standards.

(1) ~~Securing easements.~~When an easement is required. If a project changes the flow type ~~(example: sheet flow to channel~~(for example, converting from sheet flow to channelized flow), changes the flow channel, ~~discharges the stormwater at rates exceeding the permissable rates set by the standard(s) applicable to the project,~~qualifies for a waiver based on an insignificant increase in peak flow rates pursuant to Section 4(D)(2)(b), or causes or increases flooding in areas not owned or controlled by the applicant, then the applicant must secure easements from the affected property owner(s).

The department may determine that the expected change in flow, channel or impact is so insignificant as to not require an easement under this chapter. The department may require the applicant to provide evidence that such impacts ~~do~~will not occur or, if they ~~do~~will occur, provide evidence of the extent of the impact and evidence that suitable easements have been obtained.

NOTE: The department's decision to issue a stormwater permit, to require or not require an easement, or to specify the location or width of an easement is not intended to affect other federal, state or local requirements for easements or the availability of legal or equitable remedies for impacts due to stormwater runoff.

(2) Easement specifications and restrictions. The following specifications and restrictions apply to all easements established under this standard.

(a) Land use restrictions. Suitable land-use restrictions must be included in the easements to prevent any activity that might affect drainage to, across, or from the area affected by the easement.

(b) Drainage easements. Drainage easements must include all~~new,~~ off-site channels constructed to receive flows from the project and any~~existing,~~ off-site channels receiving increased peak flow rates from the project. Drainage easements must extend up to, but not include, the channel of any river, stream, or brook accepting flow from the project. Drainage easements must conform with the center line of the drainageway or pipe and must have a minimum width of 30 feet, or 10 feet on each side of the channel or pipe required to accommodate the flow from a 25-year, 24-hour storm, whichever is greater. A reduction in the minimum width may be approved by the department if the full width is not available because of unavoidable physical limitations of the site. However, the minimum width allowed must still be sufficient to avoid an adverse impact on existing uses and to allow access for maintenance and repair.

(c) Flooding easements. Flooding easements must include all off-site areas flooded due to the project's development. These areas include, but are not limited to, those flooded due to the project overloading storm sewers, culverts, stormwater basins, and equivalent utilities with increased runoff; filling existing areas of runoff storage; diverting flows onto off-site properties; and impeding runoff from the project parcel or off-site areas. Flooding easements must conform to the greatest extent of inundation due to the increased runoff from a 25-year, 24-hour storm.

(d) Erosive flows. The flow through the easement or flooding within the easement may not cause erosion of soil or sediment.

(3) Areas transferred. When the permittee transfers land that contains areas of flow or areas to be flooded as described in (2)(a), (b) and (c), restrictive covenants protecting these areas must be included in any deeds or leases, and recorded at the appropriate county registry of deeds. Also, in all conveyances of such areas and areas containing parts of the stormwater management system, the permittee shall include deed restrictions making the conveyance subject to all applicable terms and conditions of the permit. These terms and conditions must be incorporated by specific and prominent reference to the permit in the deed. All conveyances must include in the restrictions the requirement that any subsequent conveyance must specifically include the same restrictions unless their removal or modification is approved by the department. These restrictions must be written to be enforceable by the department, and must reference the permit number.

(4) Buffers. Buffers~~and vegetated filters~~ must be protected from alteration through deed restrictions or conservation easement to which the department is a party.~~ See Appendix F.~~

NOTE: Suggested templates for deed restrictions and conservation easements for use under the Stormwater Management Law can be found in Appendix G of this chapter.

5. Other applicable standards. The following standards apply to a project as described in this section in addition to the basic, general, urban impaired stream, and flooding standards.

A. Management of stormwater discharges. A project discharging concentrated stormwater runoff through an open-channel or pipe to any point that is not an open channel, an inlet to a storm drain system, or a natural or man-made impoundment must convert the concentrated flow to sheet flow to prevent erosion of the downstream receiving area. The conversion of concentrated flow to sheet flow must be done using properly designed level spreaders meeting the criteria below.

(1) Discharge to a level spreader. The peak stormwater flow rate to a level spreader due to runoff from a 10-year, 24-hour storm must be less than 0.25 cubic feet per second (0.25 cfs) per foot length of level spreader lip.

(2) Drainage area. The maximum drainage area to the spreader may not exceed 0.10 acre per foot length of level spreader lip.

(3) Length of level spreader. The level spreader length may not be more than 25 feet unless approved by the department.

(4) Siting of level spreader. The level spreader must be sited so that flow from the level spreader will remain in sheet flow until entering a natural or man-made receiving channel. The natural or man-made channel must be located within 300 feet of the level spreader.

This standard is not applicable for level spreaders discharging runoff to vegetated ~~filters~~buffers used to meet the general standards. Requirements for these level spreaders can be found in Appendix F.

B. ~~**Groundwater protection (infiltration) standard.** If pre-treatment is recommended as part of applicable stormwater best management practices or required by the department, pre-treatment of stormwater must occur prior to discharge to the infiltration area. The infiltration area must minimize discharge of soluble pollutants to groundwater, andmust be maintained to assure that its capacity for infiltration and pollutant removal is unimpaired. A project must either meet the license by rule standards in Appendix D, or obtain a waste discharge license under the Waste Discharge Law.~~

~~**C.**~~ **Discharge to freshwater** ~~**wetlands, coastal wetlands, or small ponds.**~~**or coastal wetlands.** Stormwater standards for the waterbody must be met before the stormwater enters a wetland~~ or small pond~~, unless otherwise approved by the department or unless the affected area of wetland qualifies for an exemption pursuant to the Natural Resources Protection Act, 38 M.R.S.A. § 480-Q(17). Wetlands~~and small ponds~~ must receive stormwater in the same manner as before the project unless otherwise approved or required by the department. In general, new or increased stormwater discharges into wetlands~~and small ponds~~ must be put into sheet flow using level spreaders designed to meet the requirements in Section 5(A). The department may allow alternate stormwater treatment measures if those measures will not unreasonably adversely affect the wetland~~ or small pond~~.

The discharge of runoff to a wetland due to a 2-year storm may not increase the mean storage depth within a wetland more than two inches above pre-development levels for more than 24 hours from the end of the storm event unless otherwise approved by the department. The department may consider cumulative impacts due to runoff from other projects when applying this standard to any wetland.

~~**D.**~~**C. Threatened or endangered species.** Additional stormwater standards may apply on a case-by-case basis if the department determines that such standards are necessary to avoid significantly altering the habitat of a threatened or endangered plant or animal species or violating protection guidelines.

NOTE: Title 12 M.R.S.A. § 7755-A prohibits state agencies from issuing a permit that will significantly alter the habitat of any species designated as threatened or endangered species or violate protection guidelines.

~~E.~~D. Additional controls. ~~A stormwater project that includes more than 3 acres of impervious area or 5 acresof developed area and Site Law developments of any size may be required to use additional controls if~~If the department determines ~~they~~that additional controls are necessary to avoid an unreasonable impact on any wetland or waterbody due to pollutants that are not adequately addressed by the standards described ~~above.~~ in Sections 4 and 5, a stormwater project that results in three acres or more of impervious area or 20 acres or more of developed area, requires review pursuant to the Site Law, or is a modification of any size as described in Section 16 of this chapter may be required to use additional controls. This is a case-by-case determination based upon factors such as the size, nature and intensity of the development, characteristics of the affected natural resource, topography and soils.

For example, stormwater from a metallic mineral mining or advanced exploration activity regulated under ~~06-096 CMR 200~~the department's regulations, Metallic Mineral Exploration, Advanced Exploration and Mining regulations (06-096 CMR 200), may contain contaminants, such as high concentrations of dissolved metals, or be very acidic or alkaline, for which stormwater~~quality~~ BMPs for other commercial or industrial developments do not provide adequate treatment.

~~NOTE: Projects resulting in 3 acres or less of impervious surface permitted under the Stormwater Management Law, and projects not requiring a Site Law permit, may be required to address phosphorus, nitrates and suspended solids, but are not required to directly address other dissolved or hazardous materials unless infiltration is proposed. 38 M.R.S.A. 420-D(1)(in part).~~

~~F.~~E. Authorization for discharges to public storm sewer systems. If runoff from a project site will flow to a publicly-owned storm sewer system, then the applicant shall obtain authorization from the system's owner to discharge into the system. At its discretion, the department may require the applicant to demonstrate that the system has adequate capacity for any increases in peak flow rates and volumes to the system.

6. Compensation fees and ~~elimination or reduction of off-site existing sources .~~mitigation credit.
The department may allow the applicant to reduce the acreage treated or lower the phosphorus export reduction required to meet general standards in Section 4(B) ~~by eliminating or reducing~~and 4(C)~~other off-site sources oron-site sources, or~~ through payment of a compensation ~~fee,~~fee or mitigation. Mitigation eliminates or reduces other off-site sources or pre-development on-site sources, in accordance with the requirements of Sections 6(A) through (D) below. The project must still meet the basic standards, ~~urban impaired stream standard~~general standands, and the flooding standard described in Sections 4(A), ~~(C)~~(B), and (D), respectively, if applicable.

A. A project required to meet BMP standards that is in an urban impaired stream watershed.

(1) Determining compensation fees or mitigation credits. If a project is required to meet the urban impaired stream standard described in Section 4(C), compensation fees or mitigation credits are determined as follows.

Type of surface with or without required treatment	Required compensation fee (per acre*)	Required mitigation credit (per acre*)
Non-roof impervious area	$5,000.00	0.5 credits
Roof	$2,000.00	0.2 credits
Non-impervious developed area	$1,000.00	0.1 credits

*per acre fees are based on whole or partial acreages of impervious or disturbed area.

Compensation fees may only be used in watersheds where a compensation fee utilization plan has been approved by the department. If a compensation fee utilization plan is proposed by an applicant who is not a municipality, the applicant must demonstrate that the plan has been submitted to the municipality in which the project is located for review prior to submittal of an application to the department.

NOTE: If a project is located in the watershed of a public drinking water supply, the municipality is required by 30-A M.R.S.A. § 4358-A(5) to notify the water district of the application as an abutter.

(2) Amount of credit. The following table indicates the amount of credit earned for a variety of allowed off-site mitigation activities.

Mitigation activity	Source type	Credit earned (per acre* treated)
Retrofit with BMP standards at 1/3 required sizing or with approved flow through sedimentation device	Road or high use parking lot	0.5 credit
	Low use parking lot	0.3 credit
	Roof or other impervious area	0.2 credit
	Lawn	0.1 credit
Retrofit with BMP standards at 2/3 required sizing	Road or high use parking lot	1.0 credit
	Low use parking lot	0.6 credit
	Roof or other impervious area	0.4 credit
	Lawn	0.2 credit
Retrofit with BMP standards at required sizing	Road or high use parking lot	1.5 credits
	Low use parking lot	0.9 credit
	Roof or other impervious area	0.6 credit
	Lawn	0.3 credit
Eliminate impervious source area, replace with lawn	Road or high use parking lot	1.0 credit
	Low use parking lot	0.5 credit
Eliminate impervious source area, replace with forest	Road or high use parking lot	2.0 credits
	Low use parking lot	1.0 credit

Retrofit detention with vegetated gravel under-drains	Impervious areas only	0.5 credit

*credits earned are based on whole or partial acreages of impervious or disturbed area.

In addition to the use of off-site mitigation or compensation fees, the department may approve other mitigation measures on a case-by-case basis. Other measures proposed by an applicant must provide at least equivalent protection as measures described in the table above, as determined by the department.

(3) Reduction of compensation fee or mitigation requirements for projects in watersheds with an approved watershed management plan. The department may waive or reduce requirements for compensation fees or mitigation credit if a municipality, or quasi-municipal entity having jurisdiction over the area in which the project is located has developed and is implementing a watershed management plan for the watershed in which the project is located. The watershed management plan must be approved by the department as meeting the purpose of restoring water quality. Within a designated growth area of a municipality with an adopted comprehensive plan that has been found to be consistent with the Planning and Land Use Regulation Act, implementation of the watershed management plan may be deferred for up to five years from the date of department approval, or until state or federal financial assistance is available, whichever comes first.

B. ~~A.~~ A project required to meet BMP standards that is not in an urban impaired stream watershed.

(1) Reducing acreage that must be treated by eliminating or reducing an off-site or on-site pre-development impervious stormwater source. If a project is required to meet the BMP standards described in Section 4(B)(1) and it is not in an urban impaired stream watershed, the department may allow the portion of a project's impervious or developed acreage that must be treated to be reduced through mitigation by eliminating or reducing an off-site or on-site pre-development impervious stormwater source.

For the purposes of this section, "pre-development" area means an impervious or developed area created prior to the effective date of the Stormwater Management Law for a stormwater project, or the effective date of the jurisdictional threshold under which a development is licensed for a Site Law development.

~~percent~~(2) When the amount of impervious or developed acreage that must be treated may be reduced. The department may allow the portion of a project's impervious or developed acreage that must be treated to be reduced if the applicant agrees to ~~eliminate or reduce~~mitigate by eliminating or reducing an off-site or on-site pre-development impervious stormwater source. A source is considered to be eliminated if impervious area is removed, the underlying soil is aerated, and the area revegetated and returned to a wooded condition. A source is considered to be reduced if the impervious area is removed, the underlying soil is aerated and the area revegetated and maintained as a lawn or other non-forested area. The amount of reduction in treated acreage allowed will be determined on a ~~case by case~~case-by-case basis by the department, based on the existing and future uses of the project site, the existing and future use of the eliminated or reduced off-site or pre-development on-site

impervious area, and the equivalency of these uses. In determining whether to approve a~~n off-site~~ mitigation proposal, the department will determine whether the expected reduction in stormwater pollutant export and stormwater flows can reasonably be expected to exceed the stormwater pollutant export and stormwat~~t~~er flow resulting from the untreated acreage at the project site.

(3) When the amount of roof or non-impervious developed acreage that must be treated may be reduced. The department may allow the portion of a project's roof or non-impervious developed acreage that must otherwise be treated to be reduced by an acreage equivalent to the acreage of on-site pre-development parking or road surfaces for which the applicant agrees to incorporate and maintain stormwater treatment structures.

~~**B.**~~**C. A project in a lake watershed that is required to meet the phosphorus standards.** If a project is required to meet the phosphorus standards described in Section 4(B)(2), an off-site mitigation credit may be allowed, but only to eliminate or reduce off-site sources of phosphorus. A source is considered to be eliminated if impervious area is removed, and the area is revegetated and returned to a wooded condition. A source is considered to be reduced if the impervious area is removed, and the area is revegetated and maintained as lawn or other non-forested area. For every two pounds of estimated off-site phosphorus export that is eliminated or reduced, estimated on-site phosphorus export may be reduced by one pound, provided eliminating or reducing off-site existing sources does not require maintenance. If the applicant can demonstrate, based on type of impervious area and intensity of use, that the level of phosphorus export from the eliminated or reduced off-site area is equivalent to or greater than that expected from the proposed impervious area, then a credit may be allowed at a ratio of 1 to 1. As an alternative, a compensation fee may be paid to off-set no more than 50% of the required reduction in export at a rate of $10,000 per pound of phosphorus export, as described in 38 M.R.S.A. § 420(D)(11)(A).

NOTE: For guidance in determining phosphorus export see "Phosphorus Control in Lake Watersheds", Maine Department of Environmental Protection.

~~**C. Location.** The off-site~~**D. Location.** The mitigation activity must be located in the same watershed as the project to off-set the impact of the pollutant export from the project. More than one mitigation activity may be applied to a project.

~~**D. Protection.**~~**E. Protection from alteration.** Areas in which an off-site ~~existing~~or on-site pre-development stormwater source has been reduced or eliminated as described in Section ~~6(A) and (B)~~6(A), (B), and (C) must be protected from alteration through deed restrictions, a conservation easement to which the department is a party, or similar measures. These covenants must specify that they may only be modified with department approval. See Appendix G.

~~**E.**~~**F. Maintenance and transfer**. Areas revegetated to off-set project impacts must be maintained as required by the permit, and any transfer of these areas must be made subject to deed restrictions that require such maintenance and are enforceable by the department. These covenants must specify that they may only be modified with department approval.

7. Stormwater permit by rule (PBR)

A. When a project qualifies for a stormwater PBR. A project qualifies for a stormwater PBR if it results in ~~the following.~~one or more acres of disturbed area and the following:

(c) Less than 20,000 square feet of impervious area and 5 acres of developed area in the direct watershed of a lake most at risk or urban impaired stream; and

~~(2)~~(d) Less than one acre of impervious and five acres of developed area in ~~all other watersheds.~~any other watershed.

A project qualifying for a stormwater permit by rule and using infiltration to control runoff must either meet the license by rule standards in Appendix D, or obtain a waste discharge license under the Waste Discharge Law.

B. When a project does not qualify for a stormwater ~~permit by rule.~~PBR. A project does not qualify for a stormwater PBR if:

(1) General standards in Section 4(B) must be met;
(2) Urban impaired stream standards in Section 4(C) must be met;
(3) Flooding standard in Section ~~4(C)~~4(D) must be met;
~~(3)~~(4) Review is required pursuant to the Site Law; or
~~(4)~~(5) The habitat of a threatened or endangered species may be degraded (see Section 5(D)).

C. Notification. An applicant must file notice of the project with the department prior to beginning work on the project. The applicant shall use the notification form provided by the department and must include any submissions required in this chapter. The applicant must keep a copy to serve as the permit. The notification form must be sent to the department by certified mail (return receipt requested), or hand delivered to the department and date stamped by the department.

~~C.The notification is deemed approved~~The stormwater PBR becomes effective 14 calendar days after the department receives the ~~application~~notification form, unless the department ~~accepts the notification,~~approves or finds the notification deficient~~, or notifies the applicant that the applicantis ineligible for stormwater PBR, or requires additional information or further review,~~ prior to that date. If the department does not ~~otherwise notify the notification~~speak or write to the applicant within this 14 day period regarding the stormwater PBR notification, an applicant may proceed to carry out the project. Within this 14 day period, the department may notify the applicant that the project is ineligible for stormwater PBR, or require additional information or further review. If the department does not inform the applicant that the notification is unacceptable within the 14-day period, the notification is deemed ~~application is deemed approved~~accepted by the department.

D. Stormwater PBR submissions. An applicant for a stormwater PBR must submit an erosion and sedimentation control plan. Specific plan requirements for a stormwater PBR are described below.

(1) Plan preparation. An erosion and sedimentation control plan accompanying a stormwater PBR ~~may~~must be designed by a professional who is registered, licensed, or certified in a related land-use field, ~~and~~or by education, training, or experience is knowledgeable in erosion and sedimentation control, ~~and~~or has received specific training in erosion and sedimentation control at a department-sponsored erosion and sedimentation control workshop.

NOTE: An applicant proposing a project that is required to meet only the Basic Standards and is regulated only by a stormwater permit by rule may use erosion and sedimentation

control BMPs described in the "Citizen's Guide to Best Management Practices for Use with Maine Construction General Permit."

(2) Location plan. Submit a plan sheet showing, at a minimum, the locations of structures, disturbed land, pre-construction site topography, post-construction site topography, on-site and adjacent surface water resources, and all erosion and sedimentation control measures.

(3) Site details. Submit a plan sheet showing the following.

(a) Erosion and sedimentation control notes. Plan notes must include, but are not limited to, permanent stabilization measures, seeding and mulching rates, and a construction schedule with the proposed construction dates and timeframe for major earth moving and construction events. See Appendix A for expanded and more detailed guidance on erosion and sedimentation control plans.

(b) Construction and installation details. The plan must show construction and installation details for erosion and sedimentation control measures, including, but not limited to, sedimentation barriers, ditch lining, rip rap, and culvert inlet and outlet designs.

(4) A project qualifying for a stormwater PBR that proposes to use infiltration. Submit information described in Section 8(D)(4)(c) below. See Appendix D of this chapter.

~~(3)~~(5) Inspection and maintenance during construction. Maintain an inspection log at the construction site as described in Appendix B.

~~NOTE: See Appendix A for expanded and more detailed guidance on erosion and sedimentation control plans.~~

~~(4)~~(6) Permit extensions using stormwater PBR. An applicant for an individual stormwater permit extension eligible for stormwater PBR as described in Section 8(H) need only submit a notification form and a copy of the original project approval.

E. Discretionary authority. Notwithstanding compliance with the PBR applicability requirements and standards set forth in this chapter, the department may require an individual stormwater permit application to be obtained in any case where the department determines that the activity:

~~(1)~~

(1) May violate the standards of the Stormwater Management~~Law or Site~~ Law;

(2) Could lead to significant environmental impacts, including cumulative impacts; or

(3) Could have an unreasonable adverse impact on a protected natural resource.

8. Submissions and pre-application meetings. The applicant shall use the application form provided by the department and include evidence that affirmatively demonstrates that the standards will be met, including information such as described in this section~~, when appropriate~~. A pre-application meeting between the applicant and the department is an opportunity for the applicant to determine the statutory and regulatory requirements that apply to a specific project, and to identify the department staff person who will serve as project manager for the application.

A. Pre-application meetings for Stormwater Management Law projects. A pre-application meeting is required for a project that~~must meet stormwater standards other than the basic standards, and therefore~~ does not qualify for a stormwater PBR, unless the requirement for such a meeting is waived in writing by the department. A written request for a stormwater pre-application meeting must include a preliminary site plan, brief project description, and a regional map with the site marked. ~~This information must be sent to the attention of the Licensing Supervisor at the regional DEP office appropriate for the project site. Regional DEP offices and associated towns are listed in the application materials for a stormwater or Site Law~~ A Site Law project requires a pre-application meeting pursuant to Chapter 2, Section 10(B).
~~permit.~~

B. Design requirements. ~~The~~A design for a stormwater management system that includes any form of conveyance structure must be prepared under the supervision of, and dated, signed and sealed by, a ~~Registered Professional Engineer~~professional engineer registered in the State of Maine, who by education, training, or experience is knowledgeable in stormwater management.

C. Basic standards submissions. These submissions are required for all sites except those that~~only need to meet basic standards and therefore~~ qualify for stormwater PBR described in Section 7 above.

An erosion and sedimentation control plan or an inspection and maintenance plan for a project that does not qualify for a stormwater PBR must be prepared by a professional engineer registered in the State of Maine, or a certified erosion and sedimentation control professional.

(1) Erosion and sedimentation control plan. Submit a plan showing designs for temporary and permanent stabilization measures for all disturbed areas within the project site and for all proposed stormwater management structures. Erosion and sedimentation control plan requirements are described in Appendix A of this chapter. At a minimum, the erosion and sedimentation control plan must include the following.

(a) Location plan. Submit a plan sheet or set of plans showing, at a minimum, the location of structures, disturbed land, pre-construction site topography, post-construction site topography, on-site or adjacent water resources, and all erosion and sediment control measures.

(b) Site details. Submit a plan sheet showing the following.

(i) Erosion and sedimentation control ~~notes, including,~~notes. Erosion and sedimentation control notes, must include, but not limited to, permanent stabilization measures, seeding and mulching rates, and a construction schedule with the proposed construction dates and timeframe for major earth moving and construction events.

(ii) Construction and installation details. Construction and installation details for erosion and sedimentation control ~~measures, including, but~~measure must include, but are not limited to, sedimentation barriers, ditch lining, rip rap, and culvert inlet and outlet designs.

NOTE: For guidance, see the Maine Erosion and Sediment Control BMP Manual ~~(2003)~~.

(2) Inspection and maintenance plan. Submit a plan for the inspection and maintenance of the temporary and permanent erosion and sedimentation controls for the project site as described in Appendices A and B of this chapter. At a minimum, the inspection and maintenance plan must include the following:

(a) List of measures. Submit a list of the erosion control measure and stormwater management measures to be inspected and maintained (e.g., "parking lot catch basins").

~~(a)~~(b) Inspection and maintenance ~~during construction. Maintain an inspection log at the construction site as described in Appendix B.~~

tasks. Submit a list of inspection and maintenance tasks specific to each erosion control measure or stormwater management measure (e.g., "remove accumulated sediment s in basin sumps"). Submit the specific qualifications of the person performing each task (e.g., "a professional professional engineer ~~(b) Long-term maintenance. For projects that must meet general standards, evidence must be submitted that a qualified professional will perform maintenance on stormwater management structures, as required, through submission of an executable contract or other documentation. If a municipality or quasi-municipal district chooses to accept a stormwater management system, it shall provide a letter to the department stating that it assumes responsibility for the system, and will maintain all components of the system in compliance with department standards.~~
registered in the State of Maine will inspect the retention pond embankment").

(c) Task frequency. Indicate the required frequency of each inspection and maintenance task (e.g., "accumulated sediments will be removed from all catch basins annually in early spring").

(d) Responsible parties. Submit the name, job title, employer, employer address, phone number, and current email contact information for the person responsible for ensuring that inspection and maintenance tasks are completed. Submit the names, job titles, employer addresses, phone number, and any current email contact information of the engineers or other design professionals who designed the erosion control measures and stormwater management measures for the site. Include suppliers of proprietary erosion control measures or proprietary stormwater management measures used on the site.

(e) Maintenance plan for detention basins or retention ponds. For each stormwater management pond or basin submit, at a minimum, an inspection and maintenance plan for the pond's embankments, outlet structure, and emergency spillway. Include as part of this plan provisions for the removal and disposal of accumulated sediments in the pond and the control of woody vegetation on the pond's embankments.

(f) Maintenance plan for infiltration structures. For each infiltration structure, submit, at a minimum, an inspection and maintenance plan for the structure's pretreatment measures, embankments, surface lining, and overflow spillway. Include as part of this plan provisions for the removal and disposal of accumulated sediments in the structure and for the rehabilitation of clogged surface linings.

(g) Maintenance plan for vegetated underdrained filters. For each vegetated underdrained filter, submit, at a minimum, an inspection and maintenance plan for the filter

embankments, surface lining, underdrain piping, and overflow spillway. Include as part of this plan provisions for the removal and disposal of accumulated sediments in the structure, the rehabilitation of clogged surface linings, and the flushing of underdrain piping.

(h) Maintenance plan for stormwater buffers. At a minimum, submit a plan for inspecting and maintaining the integrity and function of the project's stormwater buffers. As part of this plan, include provisions for the inspection, maintenance, and, if necessary, reconstruction of any level spreaders or ditch turnouts used to spread runoff into the buffers. Include as part of this plan provisions for the frequent removal and disposal of accumulated sediments and debris in the level spreader and turnout bays, provisions for the inspection and repair of any eroded areas within the buffer, and provisions for the reestablishment of buffer vegetation destroyed by post-construction activities.

(i) Maintenance plan for manufactured stormwater treatment systems. For each manufactured system installed on the site, submit an inspection and maintenance plan for the system's inlet, treatment chamber(s), and outlet. The plan shall conform to the inspection and maintenance guidelines recommended by the manufacturer based on the estimated runoff and pollutant load expected to the system from the project. As part of this plan, include provisions for the frequent removal of accumulated sediments, debris, and contaminated waters from the system and, if applicable, provisions for the removal, disposal, and replacement of any clogged or spent filter media.

(j) Maintenance plan for ditches, culverts, and storm drains. Provide an inspection and maintenance plan for all stormwater conveyances to be built or installed on the site – including, but not limited to, ditches, swales, culverts, catch basins, and storm drain piping. As part of this plan, include provisions for the repair of eroded areas at the inlet, within, and at the outlet of each conveyance and include provisions for the frequent removal and disposal of accumulated sediments and debris at the inlet, within, and at the outlet of each conveyance.

~~(3)~~(2) Housekeeping. ~~These performance standards apply to all sites.~~Submit a plan to address spill prevention, groundwater protection, fugitive sediment and dust, debris and other materials, trench or foundation de-watering, or non-stormwater charges, as applicable to the specific site. Housekeeping requirements are described in Appendix C of this chapter.

D. General standards submissions. A project required to meet general standards must provide the following information and design specifications.

(1) Narrative. A narrative describing site layout, and on-site and off-site watershed hydrology, including all new and existing buildings and facilities, which may be affected by the site runoff. Provide the total amount of impervious area, disturbed area, and developed area created by the project.

(2) Drainage Plans. All topographic features, such as buildings and other facilities, drainageways, cover type, roads, drainage easements and subcatchment boundaries for pre-construction and post-construction conditions must be shown on a plan. Show all hydrologic flow lines and hydrologic soil groups boundaries on a plan and identify each subcatchment, reach, and pond

consistent with the runoff model. For post-construction conditions, show all new stormwater management structures and changes to the hydrologic drainage patterns.

(3) Calculations. The stormwater runoff calculations for measures designed to meet general standards must be in accordance with acceptable engineering practice, including the ~~following:~~following.

(a) Water volume. Calculations used to determine the water volume needed to be filtered, infiltrated, or detained based on the proposed site development must be provided.

(b) ~~Sizing for buffers.~~Buffer sizing. Buffers used for runoff control must be sized according to requirements described in Appendix F.

(4) Details, designs, and specifications. Submit designs, construction details, and technical specifications for each stormwater management measure that will be constructed, installed, or managed on the site.

(a) Ponds. Submit a plan sheet having the following details and specifications for each stormwater management pond: a topographic plan view of the pond, a cross section of the pond embankment, a cross section and profile of the overflow spillway, test pit information, and specifications for constructing and stabilizing the pond's embankment. The peak storage depth required to meet the general standards must be shown on a cross section for each pond embankment. Submit a cross section of the gravel underdrain filter for any pond used to meet the~~BMP~~ standards. This cross section must specify the width and elevation of the pond bench, the thickness and gradation for the gravel drainage fill, and the diameter and material for the perforated underdrain pipe.

(b) ~~Filters.~~Underdrained vegetated filters. Submit a plan sheet having the following details and specifications for each underdrained vegetated filter area: a plan view of the filter area, a cross section of the embankment for the filter area at the overflow spillway, a cross section and profile of the overflow spillway, a cross section of the underdrain filter, and specifications for stabilizing the filter bed with sod. The cross section of the underdrain filter must specify the thickness and composition of the soil filter media, the thickness and gradation of the gravel drainage fill, and the diameter and material type for the perforated underdrain pipe.

(c) Infiltration. Submit a plan sheet showing the following details and specifications for each infiltration ~~structure:~~measure: a plan view of the infiltration structure, a cross section of the infiltration ~~structure's~~measure's runoff storage area, a cross section and profile of the structure's overflow spillway, and details and specifications for permanently stabilizing the infiltration area. The following information must be included, if required, as determined by the department and described below.

(i) Locations of any monitoring wells necessary for assessing the infiltration ~~structure's~~measure's performance or stormwater infiltration impacts on groundwater, surface irrigation sites, or subsurface wastewater disposal systems must be shown on the site ~~plan;~~plan.

(ii) Location of an existing or proposed surface irrigation site, waste disposal site, subsurface wastewater disposal system, or other facility that could be impacted by operation of the infiltration system must be shown on the site ~~plan;~~plan.

(iii) Location of any soil borings, test pits, or other explorations used to determine depth to groundwater, separation from bedrock, or other design information must be shown on the site ~~plan;~~plan.

(iv) Location of any water supply wells on-site or within 300 feet of the infiltration areas, zones of contribution for public water supply wells must be shown on the plan ~~sheet;~~ sheet.

(v) Location of storage for any petroleum products, pesticides, fertilizers, road salt, hazardous materials, or other materials with the potential to contaminate groundwater must be shown on the site ~~plan;~~plan.

(vi) Plans for management of any potential contaminants and soil sample analyses, such as a spill prevention, control, and countermeasure plan, must be submitted with appropriate supporting ~~information; and~~information.

(vii) Depth to the seasonal high groundwater table, depth to bedrock, and the thickness and composition of any liner used for restricting infiltration rates must be shown on the cross section view of the infiltration ~~structure;~~structure.

(d) Buffers. Submit a topographic site plan showing the location of each~~treatment~~ buffer on the site, showing the layout of any berm level spreaders used to spread flows into each buffer, identifying the soil type and cover type within each buffer, and showing the land use and impervious and developed area draining to each buffer area. Provide a typical cross section for the berm level spreaders showing the geometry of the berm, the geometry of the upstream storage area, and the specifications for the berm ~~material.~~ material. Submit information demonstrating that the inslope fill material will have slopes no steeper than 3:1. Submit documentation, in the form of draft convenants and

~~NOTE: For guidance on stormwater BMPs, see "Stormwater Management for Maine: Best Management Practices."~~ restrictions, demonstrating that buffer area(s) will be maintained as buffer.

(5) Phosphorus export calculations. An application for a project using the phosphorus standards must include phosphorus export calculations.

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NOTE: For guidance in determining phosphorus export see "Phosphorus Control in Lake Watersheds", Maine Department of Environmental Protection.

(6) Maintenance contract. Submit an executable contract with a third-party for the removal of accumulated sediments, oils, and debris within any proprietary devices and the replacement of any absorptive filters. The frequency of sediment clean-out and filter replacements must be consistent with the unit's storage capacity and the estimated pollutant load from the contributing drainage area. This clean-out frequency is usually established by the manufacturer of the proprietary system when sizing the device for the project The contract must state that a qualified professional will perform maintenance on stormwater management systems to maintain pollutant removal levels.

E. Flooding standard submissions

(1) Control of peak flows. If a project must meet the flooding standard, the project must be designed to control the peak flows from the 2-, 10- and 25-year, 24-hour storms. This is in addition to the submittal requirements listed in Section 8(C) and (D) above.

(2) ~~Pre-construction and post-construction design.~~Details, designs, and specifications. Provide runoff curve number computations and time of concentration calculations for each subcatchment. Areas may qualify as subcatchments based on the characteristics of the site or the model used. The department will review all methods of determining subcatchments on a case-by-case basis. Provide a reach description and reach routing analysis for each drainage structure and provide pond descriptions and storage routing calculation for any stormwater management structure, detention pond and culvert backwater areas.

Acceptable stormwater methodologies and models include, but are not limited to, "TR-20 - Computer Program for Project Formulation - Hydrology," Second Edition, U.S. Department of Agriculture, Soil Conservation Service (March 1986); and "TR-55 - Urban Hydrology for Small Watersheds," Second Edition, U.S. Department of Agriculture, Soil Conservation Service (June 1986); "WIN TR-55 2003.00.24 Microcomputer Program," (January 12, 2003); and "HEC-HMS Flood Hydrology Package," U.S. Army Corps of Engineers (January 2001). Any methodology or model other than those listed must have prior approval from the department.

F. Transfer. An applicant may apply for a transfer of an individual Stormwater Management Law project pursuant to Section ~~9(A)(4).~~10(A)(4). If the project was approved under stormwater PBR, the transferee of the property shall apply for a new stormwater PBR.

G. Modification. An applicant may apply for a modification of an individual Stormwater Management Law permit. If a stormwater PBR needs to be modified, the applicant shall file a revised stormwater PBR notification.

H. Permit extension. An individual permit issued under the Stormwater Management Law may be extended one time using a stormwater PBR provided that the approved project has not begun and permit has not expired. If a stormwater PBR needs to be extended, the applicant shall file a revised stormwater PBR notification form. This section does not apply to an extension request for a permit previously extended using a stormwater PBR.

9. Municipal stormwater management programs. The department may allow a municipality or a quasi-municipal organization, such as a watershed management district, to substitute a management system for stormwater for the stormwater permit requirement pursuant to 38 M.R.S.A. § 420-D(2). The management system may apply to an entire watershed, or a subcatchment, of a receiving water, and may include multiple watersheds within the jurisdiction of the municipality or quasi-municipal organization. A project located within the area served by a management system approved by the department is exempt from the stormwater permit requirements contained in this chapter.

The municipality or quasi-municipality may elect to have the substitution take effect at the time the system is approved by the department, or at the time the system is completed as provided in the implementation schedule provided by the department.

A management system may not substitute for an aspect of a project that is required to meet the infiltration standards described in Appendix D or required to obtain a waste discharge permit.

A. Program approval criteria. The department may review and approve a stormwater ~~plan~~management program submitted by a municipality or a quasi-municipal organization, such as

a watershed management district to meet this exemption, provided that the municipality or quasi-municipal organization demonstrates that the following criteria are met.

(1) Relationship to water quality. The municipality or quasi-municipal organization shall have a stormwater treatment ~~plan~~system that, upon implementation, will result in the collective treatment of stormwater from new and existing sources within the watershed and will result in water quality in the receiving water that is as good, or better, than would be achieved with stormwater permits issued by the department for individual projects The stormwater ~~plan~~system may apply to an entire watershed, or a subcatchment, of a receiving water, and may include multiple watersheds within the jurisdiction of the municipality or quasi-municipal organization.

(2) Funding and implementation. The ~~plan~~program must include funding provisions and an implementation schedule that provides that the treatment system for new and existing sources will be in place and functioning within five years unless a longer time period, not to exceed 10 years, is approved by the department.

(3) Annual reporting. The ~~plan~~program must also include a provision for annual reporting by the municipality to the department on progress toward implementation and a listing of the new development within the jurisdiction of the management system.

B. Reinstatement of permit requirement. The department may reinstate the stormwater permit requirement if it finds that the implementation schedule is not being met, or that the management program and associated stormwater treatment system is not achieving the plan's objectives.

10. Conditions of approval. The following conditions of approval apply to an individual or stormwater PBR permit required pursuant to the Stormwater Management Law, 38 M.R.S.A. § 420-D. For standard conditions of approval for a Site Law project, see 38 M.R.S.A. § 372 (12).

A. Standard conditions of approval. Unless otherwise specifically stated in the approval, a department approval is subject to the following standard conditions.

(1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S.A. § 420-D(8) and is subject to penalties under 38 M.R.S.A. § 349.

(2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

(3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

(4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval

by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.

(5) Initiation of project within two years. If the construction or operation of the activity is not begun within two years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference.

(6) Reexamination after five years. If the project is not completed within five years from the date of the granting of approval, the department may reexamine its approval and impose additional terms or conditions or prescribe other necessary corrective action to respond to significant changes in circumstances or requirements which may have occurred during the five-year period.

(7) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this approval with the conditions by the developer, and the owner and each contractor and subcontractor has certified, on a form provided by the department, that the approval and conditions have been received and read, and that the work will be carried out in accordance with the approval and conditions. Completed certification forms must be forwarded to the department.

(8) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the department.

(9) Recertification requirement. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the department.

(a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
(b) All aspects of the stormwater~~quantity and quality~~ control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.
(c) The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the ~~department.~~department, and the maintenance log is being maintained

B. Special conditions. The department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed project will proceed in accordance with the Stormwater Management Law and rules. However, terms and conditions relating to compliance with the Stormwater Management Law may not substitute for or reduce the burden of proof of the

developer to affirmatively demonstrate to the department that each of the standards of the Stormwater Management Law has been met.

11. Recording of order. The department shall record each order approving or modifying a permit pursuant to chapters 500 and 502 in the appropriate registry of deeds.

12. Severability. Should any provision of this chapter be declared invalid or ineffective by court decision, the decision shall not invalidate any other provision of this chapter.

13. Transition. For purposes of the Stormwater Management Law only, Laws 1995, c. 704, § B-4 provides that impervious areas and disturbed areas created prior to July 1, 1997 are not counted when determining the amount of such areas on a parcel, although such areas may be reviewed to the extent necessary to ensure that controls intended to address new areas function adequately. New construction on an impervious area created prior to July 1, 1997 is not counted when determining the amount of impervious area on a parcel. An area is considered "created" for purposes of this provision when local approval has been received, and construction has begun.

If the definition for "impervious area" is met, examples of "new construction on an impervious area created prior to July 1, 1997," which is not counted toward total impervious area for purposes of determining jurisdiction under the Stormwater Management Law, include the following:

A. A building demolished and a parking lot created within the footprint of the building;
B. A building constructed on a parking lot; and
C. A gravel parking lot paved over.

NOTE: The examples in ~~(A), (B) and (C)~~Section 13 (A) and (B) above would be counted toward the higher threshold for "structure area" under the Site Law. The Site Law addresses larger developments under several types of standards, and does not include an exemption for new construction on impervious area created prior to a specific date.

14. Permit shield. Compliance with a permit issued in accordance with this chapter is considered compliance with Section **4** and 5 of this chapter, except for the requirements of Appendix D. If a stormwater best management practice is approved by the department and, although adequately and appropriately constructed and maintained by the permittee, as determined by the department, it fails to meet~~a water quality~~an applicable standard provided in Section 4 or 5, the permittee is not in violation for failing to comply with ~~the~~that standard.

This section does not apply if an experimental measure is approved. See Section 15.

NOTE: This section does not apply to license by rule approvals granted, or the need for a license~~,~~ pursuant to 38 M.R.S.A. § 413, the Waste Discharge Law. A wastewater discharge license is required for any stormwater discharge that the department determines will contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the State. See 06-096 CMR 521(9)(a)(1)(v). For the permit shield provision applicable to the Waste Discharge Law, see 38 M.R.S.A. 414(8) "Effect of license".

Nothing in this section alters or affects the liability of the permittee if a violation has occurred prior to permit issuance.

15. Experimental measure. The department may, on a case-by-case~~-~~ basis, approve an experimental best management practice when requested by an applicant. However, in this case, the "permit shield" provision in Section ~~12~~14 will not apply, and the department may require the applicant to collect and submit sufficient information on the performance on the best management practice to allow evaluation. If the best management practice does not perform at least as well as would have been expected from otherwise available best management practices, the department may require the permittee to replace or otherwise redesign the system.

The department may only approve an experimental practice on a site where it would be possible to replace or redesign the experimental system if necessary.

16. Modification. If a projects has required a permit pursuant to the Stormwater Management Law or Site Law, all subsequent modifications of any size are also required to meet standards. When the applicable standard depends upon an area threshold, the area of the entire licensed project, including the modification, is included. The area may be limited if the project covers more than one direct watershed, and the standards so provide.

APPENDICES -- BASIC PERFORMANCE STANDARDS

APPENDIX A. Erosion and sedimentation control

This appendix applies to all projects.

A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 M.R.S.A. § 480-B. Sediment control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken.

NOTE: The site must be maintained to prevent unreasonable erosion and sedimentation. See 38 M.R.S.A § 420-C (in part). ~~A license is required for any stormwater discharge that the department "determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the State". 06-096 CMR521(9)(a)(1)(v)(in part).~~

Other or additional standards than those provided in Appendix A may apply, under the Natural Resources Protection Act, to a project located in or adjacent to a protected natural resource.

NOTE: For guidance on erosion and sedimentation controls, consult "Maine Erosion and Sediment Control BMPs", Maine Department of Environmental Protection ~~(2003)~~.

1. Pollution prevention. Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable.

The discharge may not result in erosion of any open drainage channels, swales, upland, or coastal or freshwater wetlands.

NOTE: Buffers improve water quality by helping to filter pollutants in run-off both during and after construction. Minimizing disturbed areas through phasing limits the amount of exposed soil on the site through retention of natural cover and by retiring areas as permanently stabilized. Less exposed soil results in fewer erosion controls to install and maintain. If work within an area is not anticipated to begin within two weeks time, consider leaving the area in its naturally existing cover.

2. **Sediment barriers.** Prior to construction, properly install sediment barriers at the edge of any downgradient disturbed area and adjacent to any drainage channels within the disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

3. **Temporary stabilization.** Stabilize with mulch or other non-erodable cover any exposed soils that will not be worked for more than 7 days. Stabilize areas within 75 feet of a wetland or waterbody within 48 hours of the initial disturbance of the soil or prior to any storm event, whichever comes first.

4. **Removal of temporary sediment control measures.** Remove any temporary sediment control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

NOTE: It is recommended that silt fence be removed by cutting the fence materials at ground level to avoid additional soil disturbance.

5. **Permanent stabilization.** If the area will not be worked for more than one year or has been brought to final grade, then permanently stabilize the area within 7 days ~~using through~~by planting vegetation ~~through planting~~, seeding, sod, or through the use of permanent mulch, or riprap, or road sub-base. If using vegetation for stabilization, select the proper vegetation for the light, soil and moisture conditions; amend areas of disturbed subsoils with topsoil, compost, or fertilizers; protect seeded areas with mulch or, if necessary, erosion control blankets; and schedule sodding, planting, and seeding to avoid die-off from summer drought and fall frosts. Newly seeded or sodded areas must be protected from vehicle traffic, excessive pedestrian traffic, and concentrated runoff until the vegetation is well-established. If necessary, areas must be seeded and mulched again if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. One or more of the following may apply to a particular site.

   (a) Seeded areas. For seeded areas, permanent stabilization means a~~n~~ 90% cover of healthy plants with no evidence of washing or rilling of the topsoil.

   (b) Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

   (c) Permanent Mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion ~~Control Mix~~control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

   (d) Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.

   (e) Agricultural use. For construction projects on land used for agricultural purposes (e.g., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.

   (f) Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.

(g) Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with a 90% cover of healthy vegetation, with a well-graded riprap lining, or with another non-erosive lining such as concrete or asphalt pavement. There must be no evidence of slumping of the channel lining, undercutting of the channel banks, or down-cutting of the channel.

6. Winter construction. "Winter construction" is construction activity performed during the period from November 1 through April 15. If disturbed areas are not stabilized with permanent measures by November 1 or new soil disturbance occurs after November 1, but before April 15, then these areas must be protected and runoff from them must be controlled by additional measures and restrictions.

NOTE: For~~specific~~ guidance on winter construction standards, ~~contact the Department for a copy of the "Winter Construction Standards and Guidelines for Stabilizing Sites for Winter Construction."~~ see the "Maine Erosion and Sediment Control BMPs", Maine Department of Environmental Protection.

7. Stormwater channels. Ditches, swales, and other open stormwater channels must be designed, constructed, and stabilized using measures that achieve long-term erosion control. Ditches, swales, and other open stormwater channels must be designed to handle, at a minimum, the expected volume of run-off. Each channel should be constructed in sections so that the section's grading, shaping, and installation of the permanent lining can be completed the same day. If a channel's final grading or lining installation must be delayed, then diversion berms must be used to divert stormwater away from the channel, properly-spaced check dams must be installed in the channel to slow the water velocity, and a temporary lining installed along the channel to prevent scouring. Permanent stabilization of channels is addressed under Appendix ~~A(6)(g)~~A(5)(g) above.

8. Roads. Gravel and paved roads must be designed and constructed with crowns or other measures, such as water bars, to ensure that stormwater is delivered immediately to adjacent stable ditches, vegetated buffer areas, catch basin inlets, or street gutters.

~~NOTE: Gravel and paved roads should be maintained so that they continue to conform to this standard in order to prevent erosion problems. The department recommends that impervious surfaces, including roads, be designed and constructed so that stormwater is distributed in sheet flow to natural vegetated buffer areas, wherever such areas are available. Road ditches should be designed so that stormwater is frequently discharged via ditch turnouts in sheet flow to adjacent natural buffer areas wherever possible.~~

9. Culverts. Culverts must be sized to avoid unintended flooding of upstream areas or frequent overtopping of roadways. Culvert inlets must be protected with appropriate materials for the expected entrance velocity, and protection must extend at least as high as the expected maximum elevation of storage behind the culvert. Culvert outlet design must incorporate measures, such as aprons or plunge pools, to prevent scour of the stream channel. The design must take account of tailwater depth.

10. Parking areas. Parking areas must be constructed to ensure runoff is delivered to adjacent swales, catch basins, curb gutters, or buffer areas without eroding areas downslope. The parking area's subbase compaction and grading must be done to ensure runoff is evenly distributed to adjacent

buffers or side slopes. Catch basins must be located and set to provide enough storage depth at the inlet~~s~~ to allow inflow of peak runoff rates without by-pass of runoff to other areas.

11. Additional requirements. Additional requirements may be applied on a site-specific basis.

APPENDIX B. Inspection and maintenance

Section (1) This appendix applies to all projects. A project that is only required to meet basic standards (stormwater PBR) must meet the standards in Section 1. All other projects must meet standards in Sections 1 through 5.

1. During construction See Appendix D(5) for additional maintenance requirements related to infiltration of stormwater.

1. During construction. The following standards must be met during construction.

(a) Inspection and maintenance.corrective action. Inspect disturbed and impervious areas, erosionand sedimentation control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Do the inspectionsInspect these areas at least once a week as well as before and after a storm event, and prior to completion of permanent stabilization.completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections.

in this permit and any departmental companion document to this permit, must conduct the inspection. This person must be identified in the inspection log.

(b) Maintenance. Maintain all measures in effective operating condition until areas are permanently stabilized. If best management practices (BMPs) need to be modified or ifAll measures must be maintained in effective operating condition until areas are permanently stabilized.

maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within 7 calendar days and prior to any storm event (rainfall).

(b) Inspection log.(c) Documentation. Keep a log (report) summarizing the inspections and any corrective action taken. The log must include the name(s) and qualifications of the personnel making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

Sections (2) through (5) apply to all projects required to meet only the basic standards (stormwater PBR).

2. Post-construction The log must be made accessible to department staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

3. Post-construction. The following standards must be met after construction.

(a) Plan. Carry out an approved inspection and maintenance plan (a) Maintenance plan. Keep a plan for the**that is consistent with the minimum requirements of this section.**

The plan must address **inspection and maintenance of the** ~~site's stormwater management system and permanent erosion and sedimentation controls. The plan must be developed by a professional engineer or other professional knowledgeable with the specific design of the site's stormwater management measures and permanenterosion and sedimentation controls. At a minimum, the inspection and maintenance plan must include the following items.~~ project's permanent erosion control measures and stormwater management system. This plan may be combined with the plan listed in Section 2(a) of this appendix. See Section 8(C)(2) for submission requirements.

~~(i) List the stormwater management measures and erosion and sedimentation controls that are to be inspected and maintained (e.g. "parking lot catch basins").~~

~~(ii) List the inspection and maintenance tasks required for each stormwater management measure or erosion and sedimentation control (e.g. "remove accumulated sediments in basin sumps"). List the specific qualifications (if any) needed by the person performing each task (e.g. "a professional engineer must perform the inspection of the retention pond embankment").~~

~~(iii) Indicate the required frequency of performing each inspection or maintenance task (e.g. "annually in early spring").~~

~~(iv) State the name, job title, employer, employer address, and phone number of the person responsible for ensuring that inspection and maintenance tasks are done.~~

~~(v) Provide the names, job titles, employer addresses, and phone numbers of the engineers and other professionals who designed the site's stormwater management measures and permanent erosion and sedimentation controls. This includes suppliers of proprietary stormwater management measures or proprietary erosion and sedimentation controls used on the site.~~

~~(vi). Provide a maintenance log to record the inspections and maintenance performed on the site. Fill out the a maintenance log by giving the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after their removal.~~

(b) ~~Maintenance tasks.~~Inspection and corrective action. All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections. The following areas, ~~structures,~~facilities, and measures must be inspected and identified deficiencies must be ~~maintained. Areas, structures,~~corrected. Areas, facilities, and measures other than those listed below may ~~need~~also require inspection on ~~the~~a specific site. Inspection or maintenance tasks other than those discussed below ~~developed may~~must be included in the maintenance plan developed for ~~the~~a specific site.

NOTE: Expanded and more-detailed descriptions for specific maintenance tasks may be found in the Maine DEP's "Stormwater Management for Maine: Best Management Practices."

(i) Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. See permanent stabilization standards in Appendix A(5).

(ii) Inspect ditches, swales and other open stormwater channels in the spring, in late fall, and after heavy rains to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and to repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or sideslopes.

(iii) Inspect culverts in the spring, in late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.

(iv) Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring. Clean-out ~~should~~must include the removal and legal disposal of any accumulated sediments and debris at the bottom of the basin, at inlet any grates, at any inflow channels to the basin, and at any pipes between basins. If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).

(v) Inspect resource and treatment buffers at least once a year for evidence of erosion, concentrating flow, and encroachment by development. If flows are concentrating within a buffer, site grading, level spreaders, or ditch turn-outs must be used to ensure a more even distribution of flow into a buffer. Check down slope of all spreaders and turn-outs for erosion. If erosion is present, adjust or modify the spreader's or turnout's lip to ensure a better distribution of flow into a buffer. Clean-out any accumulation of sediment within the spreader bays or turn-out pools.

(c) Regular maintenance

(i) Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Grading of gravel roads, or grading of the gravel shoulders of gravel or paved roads, must be routinely performed to ensure that stormwater drains immediately off the road surface to adjacent buffer areas or stable ditches, and is not impeded by accumulations of graded material on the road shoulder or by excavation of false ditches in the shoulder. If water bars or open-top culverts are used to divert runoff from road surfaces, clean-out any sediments within or at the outlet of these structures~~so~~ to restore their function.

~~**(vi) Inspect resource and treatment buffers at least once a year for evidence of erosion, concentrating flow, and encroachment by development. Management of a**~~(ii) Manage each buffer's vegetation ~~**must be consistent**~~consistently with the requirements in any deed restrictions for the buffer~~s~~. Wooded buffers must remain fully wooded and have no disturbance to the duff layer. Vegetation in non-wooded buffers ~~**must**~~may not be cut~~**no**~~ more than three times per ~~**year and no**~~year, and may not be cut shorter than six inches. ~~**Erosion within a buffer must be repaired as soon as practicable. If flows are concentrating within the buffer, site grading, level spreaders, or ditch turn-outs must be used to ensure a more even distribution of flow into the buffer.**~~

~~Check down slope of all spreaders and turn-outs for erosion. If erosion is present, adjust or modify the spreader's or turnout's lip to ensure a better distribution of flow into the buffer. Clean-out any accumulation of sediment within the spreader bays or turn-out pools.~~

~~(vii) The maintenance plan for each detention basin or retention pond must include, at a minimum, embankment inspection and maintenance, outlet inspection and clean-out, emergency spillway maintenance, and sediment removal and disposal.~~

~~(viii) The maintenance plan for infiltration structures must include, at a minimum, clean-out pretreatment measures, infiltration rehabilitation, and sediment removal and disposal.~~

~~(ix) Contract with a third-party for the removal of accumulated sediments, oils, and debris within the device and the replacement of any absorptive filters. The frequency of sediment clean-out and filter replacements must be consistent with the unit's storage capacity and the estimated pollutant load from the contributing drainage area. This clean-out frequency is usually established by the manufacturer of the proprietary system when sizing the device for the project.~~

NOTE: Contact~~staff in~~ the department's Division of Watershed Management (Maine DEP) for assistance developing inspection and maintenance requirements for other drainage control and runoff treatment measures installed on the site.

~~NOTE:~~ The maintenance needs for most measures may be found in the Maine DEP's "Stormwater Management for Maine: Best Management Practices."

(d) Documentation. Keep a log (report) summarizing inspections, maintenance, and any corrective actions taken. The log must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal.

The log must be made accessible to department staff and a copy provided to the department upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

3. Maintenance contract. ~~The applicant must demonstrate through submission of an executable contract with a qualified professional that maintenance will be performed as required.~~

Contract with a third-party or other qualified professional, as approved by the department, for the removal of accumulated sediments, oils, and debris within any proprietary devices and the replacement of any

absorptive filters. The frequency of sediment clean-out and filter replacements must be consistent with the unit's storage capacity and the estimated pollutant load from the contributing drainage area. This clean-out frequency is usually established by the manufacturer of the proprietary system when sizing the device for the project.

4. Re-certification. Submit a certification of the following to the ~~**4. Maintenance certification.** Within~~department within three months of the expiration of each five-year interval from the date of issuance of the ~~permit, submitcertification of the following to the~~ permit.~~department.~~

(a) Identification and repair of erosion problems. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

(b) Inspection and repair of stormwater ~~facilities.~~control system. All aspects of the stormwater~~quantity and quality~~ control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the ~~facilities.~~system, or portions of the system.

(c) Maintenance. The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.

5. ~~**Period.** The permittee must submit evidence that maintenance has been performed aon all components of the stormwater management system as described above until it~~ **Duration of maintenance.** Perform maintenance as described and required in the permit unless and until the system is formally accepted by the municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. If a municipality or quasi-municipal district chooses to accept a stormwater management system, it must provide a letter to the department stating that it assumes responsibility for the ~~system, and will~~system. The letter must specify the components of the system for which the municipality or district will assume responsibility, and that the municipality or district agrees to maintain ~~all~~those components of the system in compliance with department standards. Upon such assumption of responsibility, and approval by the department, the municipality, quasi-municipal district, or association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.

6. Additional requirements. Additional requirements may be applied on a site-specific basis.

APPENDIX C. Housekeeping

These performance standards apply to all ~~sites.~~projects.

1. **Spill prevention.** Controls must be used to prevent pollutants from ~~construction and waste materials stored on site,~~being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

2. **Groundwater protection.** During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater ~~must~~may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

   See Appendix D for license by rule standards for infiltration.

   NOTE: Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1). ~~Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area, in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization. Many pollutants found in stormwater accumulate in the soils in infiltration areas and are released due to chemical changes that occur in the infiltration area over time. Consequently, runoff quality often underestimates the long-term adverse effects on groundwater quality due to these contaminants, and cannot be used as a direct indicator of anticipated adverse effects. Maintenance of the infiltration area to prevent clogging by fine sediments or accumulation of organic matter, and to prevent development of anaerobic conditions, or other conditions that could increase the risk of pollutant discharge from the infiltration area, may be necessary.~~

3. **Fugitive sediment and dust.** Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

   NOTE: An example of the use of BMPs to control fugitive sediment and dust is as follows. – Operations during wet months that experience tracking of mud off the~~construction~~ site onto public roads should provide for sweeping of road areas at least once a week and prior to significant storm events. Where chronic mud tracking occurs, a stabilized construction entrance should be provided. Operations during dry months, that experience fugitive dust problems, should wet down the access roads once a week or more frequently ~~if~~as needed.

   NOTE: Dewatering a stream without a permit from the department violates state water quality standards and the Natural Resources Protection Act.

4. Debris and other materials. Litter, construction debris, and construction chemicals exposed to stormwater must be prevented from becoming a pollutant source.

NOTE: Construction To prevent these materials from becoming a source of pollutants, construction and post-construction activities are related to a project may be required to comply with applicable provision of rules related to solid, universal, and hazardous waste, including, but not limited to, the Maine solid waste and hazardous waste management rules; Maine hazardous waste management rules; Maine oil conveyance and storage rules; and Maine pesticide requirements.

5. Trench or foundation de-watering. Trench de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site.

Equivalent measures may be taken

Alternatively, pumped discharges may be located so that "silt sacks" or equivalent products will remove much of the coarser sediments. Fine sediments are additionally reduced by the necessary downgradient buffer areas. An enclosure of an appropriate sediment barrier may be necessary also to clean polluted flow from de-watering. if approved by the department.

NOTE: For guidance on de-watering controls, consult the Maine Erosion and Sediment Control BMPs", Maine Department of Transportation's (MDOT's) *Best Management Practices for Erosion and Sedimentation Control*. Environmental Protection."

6. Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges.

7. Additional requirements. Additional requirements may be applied on a site-specific basis.

APPENDIX D. Infiltration basins, dry wells, and subsurface fluid distribution systems (Section 413 License by Rule Standards)

Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area. Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1). Many pollutants found in stormwater accumulate in the soils in infiltration areas and are released due to chemical changes that occur in the infiltration area over time. Consequently, runoff quality often underestimates the long-term adverse effects on groundwater quality due to these contaminants, and cannot be used as a direct indicator of anticipated adverse effects. Maintenance of the infiltration area may be required to prevent clogging, development of anaerobic conditions, or other conditions that could impair the functioning of the area or increase the risk of pollutant discharge from the infiltration area.

Provided that the standards in this appendix are met, a discharge to groundwater from a stormwater infiltration system is considered a *de minimus* discharge for the purposes of the Waste Discharge Licensing Program, and does not require a~~n individual~~ waste discharge license. However, nothing in this chapter may be construed to limit the ~~Department's~~department's licensing or enforcement authority under 38 M.R.S.A. Articles 4-A or 6.

~~M.R.S.A.§413 or 38 M.R.S.A. Article 4-A.~~ NOTE: Stormwater infiltration systems not meeting the standards described in Appendix D may require a waste discharge permit. An infiltration system serving a development regulated under the Site Location of Development Act may be required to meet additional standards. For definitions and provisions associated with the Waste Discharge program, see 38 M.R.S.A. §§ 413 *et seq.*, and ~~Department~~department Rules chapters 520 *et~~seq.~~*

~~NOTE: Stormwater infiltration systems not meeting the standards above may require an individual waste discharge permit. Nothing in this chapter may be construed to limit the Department's authority under 38 M.R.S.A.§413 or 38 M.R.S.A. Article 4-A. All drywells and subsurface fluid distribution systems must be registered with and meet all other requirements of the Department's Underground Injection Control Program. An infiltration system serving a development regulated under the Site Location of Development Act may be required to meet additional standards.~~

~~All drywells and subsurface fluid distribution systems must be registered with and meet all other requirements of the Department's Underground Injection Control Program.~~

seq. All drywells and subsurface fluid distribution systems must be registered with and meet all other requirements of the department's Underground Injection Control Program.

1. Definitions. As used in this appendix, the following terms have the following meanings.

(a) Dry-weather discharges. Any discharge to a stormwater management system that is not composed entirely of stormwater, other than discharges directly resulting from fire-fighting at the facility. Dry-weather discharges can originate from direct connections to industrial, commercial, or residential facilities, or indirectly as surface or subsurface discharges to the stormwater collection system.

(b) Drywell. A well or other facility deeper than it is wide, completed above the water table so that its bottom and sides are typically dry except when receiving fluids.

(c) Infiltration. Any process specifically used to meet the stormwater~~quality or quantity~~ standards of this ~~rule~~chapter by actively directing all or part of the stormwater into the soil. ~~Infiltration~~For the purposes of this chapter, infiltration is the process by which runoff percolates through the unsaturated overburden and fractured bedrock to the water table. For the purposes of this ~~Infiltration~~chapter, infiltration does not include:

(1) Incidental wetting of soil in ditches, detention basins or the equivalent;
(2) Wetting of underdrained basins, dry swales, or similar filtration systems, provided that they discharge to surface waters or to a buffer strip; ~~and~~or
(3) Wetting of buffers meeting department requirements for use as stormwater~~quality treatment or stormwater quantity~~ control. ~~However, discharge~~Discharge of runoff to areas of the site where the water will collect and percolate into the ground is considered infiltration if the volume, rate, or quality of the discharge exceeds the runoff treatment capacity of the area, such as a stormwater buffer, as determined by the department. Underdrained swales, underdrained ponds, and similar practices that discharge to surface waters or to buffer strips meeting department requirements for ~~quality or quantity treatment buffers.~~stormwater buffers are not considered infiltration systems, although these may be used to treat runoff prior to discharge to an infiltration area.

(d) Infiltration basin. A structure wider than it is deep and designed to hold runoff without any means of discharge other than evapotranspiration, infiltration, or emergency bypass.

(e) Public water supply. Any publicly or privately-owned water-supply system that serves at least 25 people or 15 service connections for at least 60 days per year.

(f) Subsurface fluid distribution system. Any system designed to dispose of stormwater beneath the surface of the earth, including, but not limited to, wells, settling tanks, disposal fields, pretreatment filters, pipes, or any other fixture, mechanism, or apparatus used for this purpose.

(g) Zone of contribution or delineated contributing area. The projection of the three-dimensional volume of water flowing to a discharging well onto a two-dimensional map view.

2. Limitations on the use of infiltration for stormwater treatment

(a) Storage or handling of petroleum products, pesticides, fertilizers, and hazardous substances. Infiltration of runoff from subwatersheds of ~~an activity~~a project in which petroleum products, pesticides, fertilizers, hazardous substances, or other materials with the potential to contaminate groundwater are stored or handled, is not allowed unless containment ~~allowed.~~structures are used. This does not apply to storage of heating oil in a tank or tanks with a total volume of 550 gallons or less and serving a single consumptive residential or commercial user.

(b) Storage or handling of road salt or similar materials. Infiltration of runoff from subwatersheds of an activity in which road salt or similar materials are stored or handled in bulk is not allowed.

(c) Containment structures. Storage and handling areas for petroleum products, road salt, and other potential groundwater contaminants may be isolated within containment structures, buildings, or other enclosures to effectively remove those areas from subwatersheds, so that infiltration structures may be constructed to serve the remaining areas of the subwatershed, provided that the facility is operated in accordance with a ~~Spill Prevention, Control, and Countermeasures Plan,~~

Operation and Maintenance Plan,spill prevention, control, and countermeasures plan; operation and maintenance plan; or equivalent document as required by Section (8)(D)(4)(c)(vi) approved by the Department.department.

(d) Infiltration of runoff from asphalt or concrete paving or equivalent material. Infiltration of runoff from a total of one acre or more of asphalt or concrete paving or equivalent material at a given project is not allowed except by means of infiltration basins located, designed, operated, and maintained in accordance with thisappendix as described under the design criteria below.appendix. This limitation does not apply to roads entirely within subdivisions consisting of lots for single-family detached residential housing or to use ofporous pavement alternatives approved by the Department. Use of porousdepartment. Use of pavement alternatives is limited by subsections 2(a) and 2(b), and other requirements of this chapter.

(e) Infiltration of runoff from lawn areas, vegetated areas, and roofs. Infiltration of runoff from lawn areas and other vegetated areas, playing fields, and roofs of residential and commercial structures where no manufacturing or processing occurs, other than for-home-based industries, is allowed, provided that any application of fertilizers, pesticides, and similar turf-management chemicals, is in accordance with a Departmentdepartment approved management plan and no part of the areas used for infiltration is in the delineated contributing area of a well that is part of a public water supply system. Lawn areas on individual lots that are sold or developed as part of a residential subdivision consisting of lots for single-family detached residential housing are exempt from this requirement.

(f) Dry-weather discharges, and stormwater from outside drainage systems. Dry-weather discharges and stormwater from drainage systems outside the area of the activity mustmay not be discharged to an infiltration system, unless approved by the Department.department.

(a)**Typical land uses and activities for which infiltration may be acceptable.** Typical land uses and activities for which infiltration may be acceptable include, but are not limited to, the following:

(1)Residential streets and rural highways;
(2)Single-family residential development;
(3)Institutional development, except for parking areas;
(4)Office developments, except for parking areas;
(5)Non-industrial rooftops; and
(6)Pervious areas.

(b)**Typical land uses and activities for which infiltration is not acceptable.** Typical land uses and activities for which infiltration is not acceptable include, but are not limited to, the following:

(1)Vehicle storage, fueling, cleaning, or service and maintenance areas;
(2)Commercial or other large parking lots, such as those at fast-food restaurants, factories, convenience stores, high-turnover (chain) restaurants, shopping centers, and supermarkets;
(3)Road salt and sand – salt storage and loading areas (if exposed to rainfall);
(4)Rooftops of industrial facilities;
(5)Outdoor storage and loading/unloading areas of hazardous substance generators (if materials or containers are exposed to rainfall); and
(6)Marinas (service, repainting, and hull maintenance areas).

~~Location~~NOTE: Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1). Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area, in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization. Many pollutants found in stormwater accumulate in the soils in infiltration areas and are released due to chemical changes that occur in the infiltration area over time. Consequently, runoff quality often underestimates the long-term adverse effects on groundwater quality due to these contaminants, and cannot be used as a direct indicator of anticipated adverse effects. Maintenance of the infiltration area to prevent clogging by fine sediments or accumulation of organic matter, and to prevent development of anaerobic conditions, or other conditions that could increase the risk of pollutant discharge from the infiltration area, may be necessary.

3. Location

(a) Water supply wells. Unless specifically approved by the ~~Department~~department and the Department of Human Services' Drinking Water Program, if applicable, infiltration systems ~~may~~must be located no less than 300 feet from any private water supply ~~well and may~~well, must not be located within the delineated contributing area of a public water supply well, and must be ~~well.~~located as far downgradient of any water supply well as practical. Department approval of a reduced setback will be subsequent to review and approval of a study by a Maine Certified Geologist demonstrating that discharges from the infiltration system will not be within the zone of contribution of the well or wells. This limitation does not apply to on-site wells that are not used to provide drinking water.~~Infiltration systems should be located as far downgradient of any water supply well as practical~~.

(b) Subsurface wastewater disposal systems. An infiltration system ~~should be~~is considered a major watercourse for the purposes of Table 700.2 of the Maine Subsurface Wastewater Disposal Rules, 144A CMR 241, for determining applicable setbacks from the relevant components of an offsite subsurface wastewater disposal system. Additional setback distances may be required by the ~~Local Plumbing Inspector~~local plumbing inspector or the Department of Human Services' Division of Health Engineering. Allowance for lesser setbacks for onsite disposal systems or other disposal systems owned or controlled by the developer may be requested from the ~~Department, The~~department, the Department of Human Services, and the ~~Local~~local ~~Plumbing Inspector.~~plumbing inspector. Infiltration systems ~~should~~must be located as far downgradient of any component of a subsurface wastewater disposal system as practical.

(c) Protected natural resources. Infiltration systems ~~shall~~must be located no less than 25 feet from any protected natural resources as defined at 38 M.R.S.A §480-B, other than fragile mountain areas, and ~~shall~~must be located as far upgradient of any such resources as practical.

(d) Surface grade. The pre-construction surface grade ~~should~~must be 20% or less at the location of the proposed infiltration system.

(e) Separation from bedrock. Infiltration systems serving one acre or more of impervious area ~~shall~~must be located in areas with more than five feet of saturated overburden above the bedrock surface, as measured during the seasonal low water table. This restriction does not apply to runoff

from areas of non-asphalt roofing on structures in which no manufacturing or processing occurs, other than for home-based industries. Separation from bedrock and depth to the water table may be demonstrated by means of test pits, borings, or similar invasive explorations, or by non-invasive geophysical methods such as seismic surveys. Blast rock or similar material is considered as overburden and not as bedrock. Demonstration of a continuous in-situ layer, at least five feet in thickness, of unfractured basal till or marine, estuarine, or lacustrine clay between bedrock and the infiltration structure may substitute for this requirement, at the discretion of the ~~Department.~~department.

4. Design and operation

(a) Soil permeability. The permeability of the soil at the depth of the base of the proposed infiltration system must be~~and~~ no greater than 2.41 inches per hour. Permeability must be shown to be reasonably consistent across the proposed infiltration area and may be determined by in-place well or permeameter testing, by analyses of soil gradation, or other means acceptable to the ~~Department.~~department. Imported or manufactured soils or other materials (such as compost), as specifically approved by the ~~Department,~~department, may be installed at the base and sides of the proposed infiltration system to obtain this range of permeability and provide additional treatment. This layer must be at least six inches in thickness, of which the bottom three inches are to be tilled into the native soil.

(b) Vegetation of infiltration basins. All areas of the basin not covered by stone or other non-vegetative covers must be maintained as grass.

(c) Separation from seasonal high water table. The bottom of the infiltration system, including any stone layer or other material below the depth of any manufactured components of the system, must be at least three feet above the elevation of the seasonal high water table.

(d) Time for drainage. The infiltration system must be designed to drain completely within 72 hours following the runoff event.

(e) Impact on depth to groundwater. Infiltration of stormwater may not increase the elevation to the seasonal high water table beneath a surface-irrigation site, land-disposal area for septage or other waste, or other waste management or wastewater management facility, without specific approval by the ~~Department~~department and, if applicable, the Department of Human Services.

(f) Impact on groundwater flow. Stormwater infiltration may not affect the direction of groundwater flows so as to impair any groundwater monitoring programs or cause the migration of existing contaminated groundwater that would result in unreasonable adverse impact on the~~on~~ the quality of surface water, groundwater, or drinking water supplies.

(g) Mounding and seepage. Groundwater mounding due to stormwater infiltration, especially on clay, bedrock, or other low-permeability surfaces, or stormwater discharg~~i~~es to highly permeable materials such as gravel or blast rock, may not cause seepage, high pore-pressures, or other effects that will adversely affect the stability of slopes in the vicinity of the activity. A qualified professional ~~must~~shall assess the potential for seepage and reduction in slope stability, and submit a report of findings, including logs of test borings or other subsurface explorations, modeling, or other means of analysis as determined to be necessary and applicable.

(h) Conveyance of overflow. Infiltration systems must include measures to convey overflow to a stable discharge location.

(i) Control of access. Access to any infiltration area must be controlled during and after construction to prevent compaction of the soil.

(j) Geotextile. A geotextile fabric with suitable characteristics must be placed between any stone layer and adjacent soil.

(k) Sediment discharge to infiltration structures. Grassed swales, undersdrained swales, sediment traps, or similar practices must be incorporated in the design to minimize discharge of sediment to the infiltration system.

(l) Devices to trap petroleum products. Dry wells or subsurface fluid distribution systems receiving runoff from areas of asphalt or concrete paving not prohibited from using infiltration under Section 2 must include sump skimmers, sorbent booms, or similar devices to remove petroleum products from runoff. These devices must provide enough ~~sorption~~sorptive capacity to trap petroleum products for at least six months after construction and after any repaving or reconstruction.~~See also paragraph 5(d), below.~~

5. Maintenance

(a) Snow storage prohibited. Snow removed from any on-site or off-site areas ~~must~~may not be stored over an infiltration area, with the exception of~~porous~~ storage on pavement alternatives approved by the ~~Department.~~department.

(b) Groundwater monitoring. Groundwater quality monitoring may be required by the ~~Department~~department if necessary to demonstrate that the infiltration system will operate in compliance with the Water Classification Program. Groundwater quality monitoring will generally be required for activities infiltrating water from areas of heavy turf-chemical use, such as golf courses and certain athletic fields, and large connected impervious areas, such as parking lots and runways. Groundwater quality monitoring will generally not be required for activities infiltrating water from lawn areas and other vegetated areas, residential developments except for those with large parking areas, playing fields, low-use roads such as residential subdivision roads, and roofs of residential and commercial structures.

(c) Pollution-control devices. Pollution-control devices such as oil – water separators, skimmers, and booms must be inspected regularly to determine if they need to be cleaned or replaced.

(d) Observation wells, measure of sediment accumulation, and points of access for sediment removal. Observation wells to determine the system's performance and access points to allow for the removal of accumulated sediment must be included in the design of subsurface fluid distribution systems. Dry wells and infiltration basins must have staff gauges, marked rods, or similar instrumentation to measure the accumulation of sediment and determine how quickly the system drains after a storm. The maintenance plan for the infiltration system prepared in accordance with Section 8(C)(2)(f) must indicate the expected rate of drainage of the infiltration system and provide for removal of ~~sediment.~~
sediment from the infiltration system.

(e) Sediment removal and maintenance of system performance. Sediment must be removed from the system to prevent deterioration of system performance. The system must be rehabilitated or replaced if its performance is degraded to the point that applicable stormwater~~quantity or quality~~ standards are not met.

6. Additional requirements. Additional requirements may be applied on a site-specific basis.

APPENDIX E. Stormwater basins and ponds

~~Additional requirements may be applied on a site-specific basis.~~

This appendix ~~outlines the basic~~applies to all projects using stormwater basins or ponds, and outlines the criteria for siting, designing, and constructing detention basins and ponds used for meeting the department's stormwater management rules. ~~Additional requirements will need to be met by the design engineer regarding~~The department may require additional measures based onregarding geotechnical, hydrologic, structural, hydraulic, and construction concerns. ~~This includes the requirement~~For example, the department may require that the designer assess the impoundment's hazard potential for determining the appropriate design storm for the ~~impoundment. This~~impoundment because the design storm may have a greater rainfall depth and larger recurrence interval than the 25-year, 24-hour storm used for the department's stormwater management program.

1. Basin and pond types. A variety of stormwater management basins and ponds are used to control runoff quantity and improve runoff quality from developments. All need professional siting and design to avoid unreasonable impacts to wetlands, surface waters, and groundwater and to ensure long-term stability, pollutant removal performance, and control of peak flow rates. General restrictions and requirements for all basins and ponds are provided below.

NOTE: Specific siting and design criteria for each type of structure can be found in the department's manual "Stormwater Management for Maine: Best Management Practices".

2. Siting restrictions. The department has placed the following general restrictions on the siting of stormwater basins and ponds. ~~Other~~Additional restrictions may ~~apply~~be required based on drainage, geotechnical, wildlife, and safety concerns.

(a) Rivers, streams and brooks. A basin or pond may not be located in or adjacent to a river, stream, or brook (intermittent or perennial) unless approved by the department pursuant to, or exempted from, the Natural Resources Protection Act (NRPA). For the purposed of this appendix, "adjacent to" is defined as in Chapter 305~~, Section 2(D)(2)~~.

(b) Wetlands. A basin or pond may not be constructed in or adjacent to a wetland and no dam, wall, berm, or embankment may be placed within or adjacent to a wetland as part of a stormwater management system,~~so that it requires approval pursuant to the NRPA as determined by the department,~~ unless approved by the department pursuant to the NRPA. The use of natural wetlands for runoff detention or retention storage to meet the ~~flooding standard, resource protection,~~general, phosphorus, ~~or other protection~~flooding, or other standards in this chapter is prohibited unless the flooding standards in Section 4(D) are met and a Natural Resources Protection Act permit is obtained~~,~~ if required.

(c) Discharge of flows. Concentrated flows from stormwater basins and ponds may not be discharged to an off-site area that has not received concentrated flows before. When detention is used on a site, the pre-construction flow condition to off-site areas, whether sheet or concentrated, must be maintained in the post-construction condition unless drainage easements are obtained from affected property owners.

(d) Underground detention. Where underground detention is required because of limited space or other restrictions, runoff must be treated to at least a low level of stormwater treatment prior to the runoff's discharge to the underground storage facility. The department may require runoff treatment to remove other pollutants if it determines that underground storage poses a threat to groundwater quality. The outlet control structure and the storage chambers for the underground detention structure must be accessible from the surface for maintenance, debris removal, and, if necessary, future modification.

3. Design requirements

(a) Principal spillways. ~~Those basins~~Basins and ponds designed to control flows so as to meet the flooding standard must have principal spillways capable of controlling runoff from 24-hour storms of the 2-year, 10-year, and 25-year frequencies. ~~Those basins~~Basins and ponds designed to provide channel protection detention must have principal spillways capable of providing extended detention of twelve hours for runoff from a 24-hour storm of a one-year frequency. In both cases, the principal spillway must control the maximum flows from the design storm(s) without activating the emergency spillway.

(i) Trash racks. Any pipe, orifice, or culvert serving as a ~~basin's or pond's~~basin or pond outlet must have a trash rack to control clogging by debris and to provide safety to the public. The surface area of each rack must be at least four times the outlet opening it is protecting. Significantly larger trash rack areas may be required for openings less than twenty-four ~~four~~ inches in diameter. The spacing between rack bars must be no more than six inches or one-half the dimension of the smallest outlet opening behind it, whichever is less. If possible, trash racks should be inclined so to be self-cleaning.

(ii) Seepage controls. All smooth outlet pipes greater than eight inches and all corrugated outlet pipes greater than 12 inches must have seepage controls to prevent the piping of soil along the outside of the pipe. This standard applies to both dry detention basins and ponds with permanent pools.

(iii) Anti-floatation design. All outlets employing a riser structure must be designed to prevent the riser floating.

(b) Emergency spillways. Each stormwater basin and pond must have an emergency spillway designed to independently convey the routed runoff from at least the 25-year, 24-hour storm while maintaining at least one foot of freeboard between the peak storage elevation and the top of the embankment crest. All spillways must meet the following criteria.

(i) Location. Emergency spillways must be located on undisturbed, non-fill soil wherever possible. If the spillway must be located on fill soils, then the spillway must be horizontally offset at least 20 feet from the principal outlet and be designed with a riprap lining, reinforced-turf lining, or a non-flexible lining.

(ii) Exit channel grade. The maximum grade of the spillway's exit channel ~~must~~may not exceed 20% unless a non-flexible lining is used to control erosion within the channel. Vegetation, reinforced turf, riprap, and modular blocks are considered flexible linings. All linings must be evaluated for stability at the channel grade chosen.

(iii) Flow depth. The design flow depth in the exit channel may not exceed one-half the d50 stone size for channels lined with riprap. The design flow depth in the exit channel may not exceed three inches for channels lined with un-reinforced vegetation.

(c) Embankments. Basin and pond embankments must be designed by a professional engineer registered in the State of Maine. The design must include an investigation of the subsurface conditions at the proposed embankment location to evaluate settlement potential, groundwater impacts, and the need for seepage controls. The department will require the submittal of a geotechnical report from a geotechnical engineer for any embankment over 10 feet in effective height or posing a significant hazard to downstream property or life.

(i) Crest elevation. The minimum elevation of the top of the settled embankment must be at least one foot above the peak water surface in the basin with the emergency spillway flowing at design depth for the design storm routed through just the emergency spillway.

(ii) Crest width. The minimum crest width for any embankment must be as shown in the following table:

~~Effective height of embankment (feet)~~	~~Crest Width (feet)~~
Effective height of embankment (feet)	**Crest Width (feet)**
less than 10	6
10 - 15	8
15 - 20	10
20 25	12
25 – 35	14
more than 35	15

(iii) Construction. The selection of fill materials ~~shall~~must be subject to approval of the design engineer or inspecting engineer. Fill ~~shall~~must be free of frozen soil, rocks over six inches, and sod, brush, stumps, tree roots, wood, or other perishable materials. Embankment fills less than 10 feet in fill height must be compacted using compaction methods that would reasonably guarantee that the fill density is at least 90% of the maximum density as determined by standard proctor (ASTM-698). All embankment fills more than 10 feet in fill height must be compacted to at least 90% of the maximum density as determined by standard proctor (ASTM-698) and must have their density verified by field density testing.

(iv) Slopes. The embankment's slopes may not be steeper than 3 horizontal to one vertical.

~~(d) Underdrain outlets. Those basins and ponds designed to provide channel protection filtering~~(d) Underdrained soil filters. Dry detention basins designed to meet the BMP standards for soil filters must have underdrains meeting the following criteria.

(i) Impoundment depth. The peak storage depth within the filter area for the water quality volume may not exceed 18 inches.

(ii) Pipe layout and spacing. Layout of the pipe underdrain system must be sufficient to effectively drain the entire filter area. There must be at least one line of underdrain pipe for every eight feet of the filter area's width. The pipe may be either perforated PVC pipe or corrugated polyethylene drainage tubing. The slope of the installed underdrain pipe must be 1% or greater.

(iii) Pipe bedding. The underdain pipes must be bedded in clean, well-graded gravel extending at least 12 inches over the top of the drainage pipe, at least six inches thick to the sides of the drainage pipe, and at least six inches below the drainage pipe.

(iv) Filter bed. The soil filter must consist of loamy, coarse sand. The soil filter must extend across the bottom of the entire filter area. The soil filter must be at least 18 inches deep and underlain by a gravel bedding (see Appendix E, Section 3(d)(iii) above). The interface between the gravel and soil must be tilled to create a six-inch mixing zone between the two layers.

(v) Surface cover. The top of the gravel underdrain must be covered with a four-inch layer of sandy loam and then covered with a sod lining consisting of species tolerant of frequent inundation.

~~(i) Location and layout. A minimum elevation difference of four feet must be designed between the surfaces being treated and the discharge point.~~(vi) Underdrain outlet. Each underdrain system must~~outlet to a single point and each~~ discharge ~~point must be~~to an area capable of withstanding concentrated ~~flow without eroding and must be stable against saturated soil conditions.~~ flows and saturated conditions without eroding.

~~(ii) Pipe material. The filter area must be designed to detain or retain the water volume required to meet the BMP standard. Ponding and soil saturation must dissipate via the underdrained soil bed and drainpipes within 48 hours. The depth of ponding for the water volume must not exceed 18 inches within the filter area. The longitudinal slope of the under-drained area must be 1% or less to utilize the entire bed for treatment during most storms. Each filter area must have a spillway to convey runoff events that exceed the volume of the filter area. The discharge point of the spillway must be capable of withstanding and conveying frequent concentrated flows.~~

~~(iii) Pipe installation. At a minimum, one line of underdrain pipe must be provided for every eight feet of filter area width. The underdrain pipe must extend across the full length of the filter area. For impervious areas that are less than three acres, an underdrained filter system must be collected to a single four-inch diameter outlet pipe. Projects greater than three acres must be modeled to determine the number and diameter of outlet pipe required.~~

~~(iv) Filter media. The underdrain pipe must be bedded in a gravel filter that is at least 12 inches thick. The permeability of the gravel filter media must be greater than the soil filter material, with no particles exceeding 1.5 inches in diameter. The gravel filter bed must be wrapped in a geotextile blanket. The drainage material must be overlain with an 18-inch thick layer of loamy coarse sand, preferably with a high level of organic matter.~~

~~(v) Vegetation. The swale bed must be fully vegetated before it any runoff is directed into it. If grass cannot attain 90 % cover, then sod must be installed.~~

(e) Underdrained gravel filters. Wetponds designed to meet the BMP standards for gravel filters must have underdrains meeting the following criteria.

(i) Pond bench. The gravel filter must be built on a pond bench having a width of at least eight feet and having a length at least as long as the major axis of the pond. The bench elevation must be set such that the water quality volume will be stored between the bench surface elevation and the elevation of the principal spillway's lowest control outlet.

(ii) Pipe layout and spacing. The pipe underdrain system must be installed down the centerline of the pond bench. The pipe may be either perforated PVC pipe or corrugated, polyethylene drainage tubing. The pipe must be installed at a depth of at least four feet below the bench surface. The slope of the installed underdrain pipe must be 1% or greater.

(iii) Gravel bed. The gravel filter must be bedded in clean, well-graded gravel extending at least 12 inches over the top of the drainage pipe, at least six inches to the sides of the drainage pipe, and at least six inches below the drainage pipe.

(iv) Surface cover. The top of the underdrained filter must be covered with a 3 to 4-inch thick layer of loam with less than 5% of the soil passing through a #200 sieve. This loam layer must be seeded with grass or legume species tolerant of frequent inundation.

(v) Underdrain outlet. Each underdrain system must discharge to an area capable of withstanding concentrated flows and saturated conditions without eroding.

4. Additional requirements. Additional requirements may be applied on a site-specific basis.

APPENDIX F. Vegetated buffers

This appendix applies to all projects using vegetated buffers for stormwater control. A buffer is a vegetated, non-lawn area or areas located down gradient from a project that serves to store and remove pollutants from stormwater runoff flowing from a project. Buffers must not be interupted by intermittent or perennial stream channels or other drainageways and must have a relatively uniform slope so that stormwater does not concentrate in channels. This appendix describes the design and sizing requirements for vegetated buffers ~~meeting~~designed to meet the general standards. Requirements are described for four different types of buffers, each of which is appropriate for specific situations.

1. Types of vegetated buffers. The applicability of each of the four types of vegetated buffers is as follows.

~~(a)~~Vegetated buffer with stone bermed level lip spreaders. A vegetated buffer with stone bermed level lip spreaders ~~may only~~must be used~~when:~~

~~(i)~~(a) when treating stormwater runoff from any of the following:

(i) ~~an~~An impervious area greater than one acre;
(ii) ~~treating stormwater runoff draining impervious~~Impervious areas where the flow path across the impervious area exceeds 150 feet; or
(iii) ~~runoff from developed~~Developed areas, including lawns and impervious surfaces, where runoff is concentrated, intentionally or unintentionally, so that it does not run off in ~~well distributed~~well-distributed sheet flow when it enters the upper end of ~~the~~a buffer, except that road ditch runoff may be treated using a ditch turn-out buffer.

(b) Buffer adjacent to the down hill side of a road. A buffer located along the down hill side of a road may only be used when the runoff from the road surface and shoulder sheets immediately into ~~the~~a buffer. In no instance may runoff from areas other than the adjacent road surface and shoulder be directed to these buffers.

(c) Ditch turn-out buffer. A ditch turn-out buffer may only be used when runoff from a road ditch is diverted to a 20-foot stone bermed level lip spreader that distributes runoff into ~~the~~a buffer. No areas other than the road surface, road shoulder and road ditch may be directed into ~~the~~a buffer. No more than 400 ft of road and ditch may be treated in any ditch turn-out buffer, and no more than 250 feet may be treated if more than one travel lane is draining to the ditch.

(d) Buffer adjacent to residential, largely pervious or small impervious areas. A buffer adjacent to a residential, largely pervious or small impervious area that does not require that runoff be distributed by means of a level spreader may only be used when:

(i) ~~The~~A buffer is located immediately downhill of the developed area; and
(ii) ~~Where runoff~~Runoff from the developed area is not concentrated and enters ~~the~~a buffer in well distributed sheet flow.

Only runoff from the following areas may be treated using this type ~~buffer.~~buffer:

(iii) ~~Single~~A single family residential lot~~s~~;

(iv) ~~Largely pervious developed areas with less than 15% imperviousness;~~A developed area with less than 10% imperviousness where the flow path over the portion of the developed area for which treatment is being credited does not exceed 150 feet; or

(v) ~~Small impervious areas~~An impervious area of less than one acre, where the flow path across the impervious area~~averages no more than 100 feet and~~ does not exceed ~~150~~100 feet.

2. ~~Basic requirements.~~Design requirements for all buffer types. The following design requirements apply to all types of buffers.

(a) Topography**.** The topography of ~~the~~a buffer area must be such that stormwater runoff will not concentrate as it flows across ~~the~~a buffer, but will remain well-distributed. Flow paths of runoff through ~~the~~a buffer ~~should~~must not converge, but ~~should~~must be essentially par~~r~~allel or diverging.

(b) Vegetative cover. The vegetative cover type of ~~the~~a buffer must be either forest or meadow. In most instances the sizing of ~~the~~a buffer varies depending on vegetative cover type.

(i) Forest buffer. A forest buffer must have a well distributed stand of trees with essentially complete canopy cover, and must be maintained as such. A forested buffer must also have an undisturbed layer of duff covering the mineral ~~soil and activities~~soil. Activities that may result in disturbance of the duff layer are prohibited in ~~the~~a buffer.

(ii) Meadow buffer. A meadow buffer must have a dense cover of grasses, or a combination of grasses and shrubs or trees. ~~The~~A buffer must be maintained as a meadow with a generally tall stand of grass, not as a lawn. It must not be mown more than twice per calendar year. If ~~the~~a buffer is not located on natural soils, but is constructed on fill or reshaped slopes, ~~the~~a buffer surface must either be isolated from stormwater discharge until a dense sod is established, or must be protected by a ~~four~~three inch layer of erosion control mix or other woodwaste material approved by the department before stormwater is directed to it, with vegetation must be established using an appropriate seed mix.

(iii) Mixed meadow and forest buffer. If a buffer is part meadow and part forest, the required sizing of ~~the~~a buffer must be determined as a weighted average, based on the percent of ~~the~~a buffer in meadow and the percent in forest, of the required sizing for meadow and forest buffers.

(c) Deed restrictions and covenants. Areas designated as vegetated buffers must be clearly identified on site plans and protected from disturbance by deed restrictions and covenants.

3. Design specifications and sizing tables for a vegetated buffer with stone bermed level lip spreaders. Stormwater runoff must be delivered to a vegetated buffer with stone bermed level lip spreaders in either sheet or concentrated flow. These design specifications direct runoff behind a stone berm constructed along the contour at the upper margin of ~~the~~a buffer area. As a result of restriction of flow through the berm, the runoff then spreads out behind the berm so that it seeps through the entire length of the berm and is evenly distributed across the top of ~~the~~a buffer. The stone must be coarse enough that it will not clog with sediment. The berm must be well-graded and contain some small stone and gravel so that flow through the berm will be restricted enough to cause it to spread out behind the berm.

(a) Stone berm specifications. The stone berm must be at least 1.5 feet high and 2.0 feet across the top with 2:1 side slopes constructed along the contour and closed at the ends. Unless otherwise approved by the department, the design must include a shallow, 6-inch deep parabolictrapezoidal trough with a minimum bottom width of three feet, and with a level downhill edge excavated along the contour on the uphill edge of the stone berm. Stone for stone bermed level lip spreaders must consist of sound durable rock that will not disintegrate by exposure to water or weather. Fieldstone, rough quarried stone, blasted ledge rock or tailings may be used. The rock must be well-graded within the following limits, or as otherwise approved by the department.

Sieve Designation (Metric)	Sieve Designation (US Customary)	Percent by Weight passing Square Mesh Sieves
Sieve Designation (Metric)	**Sieve Designation (US Customary)**	**Percent by Weight passing Square Mesh Sieves**
300 mm	12 in	100
150 mm	6 in	84-100
75 mm	3 in	68-83
25.4 mm	1 in	42-55
4.75 mm	No. 4	8-12

(b) Buffer sizing. The required size of thea buffer area below the stone bermed level lip spreader varies with the size and imperviousness of the developed area draining to thea buffer, the type of soil in thea buffer area, the slope of thea buffer, and the vegatitivevegetative cover type. The following table indicates the required berm length per acre of impervious area and lawn draining to thea buffer for a given length of flow path through thea buffer. Required berm length varies by the Hydrologic Soil Group of thebuffer soils in a buffer and by the length of flow path through thea buffer. If more than one soil type is found in thea buffer, the required sizing of thea buffer must be determined as weighted average, based on the percent of thea buffer in each soil type, of the required sizing for each soil type buffer. Alternative sizing may be allowed if it is determined by a site specific hydrologic buffer design model approved by the department. A buffer meeting this standard is not allowed on Hydrologic Soil Group D soils that are identified as wetland soils. A buffer meeting this standard is not allowed on natural slopes in excess of 15% unless thea buffer has been evaluated using a site specific hydrologic buffer design model approved by the department, and measures have been included to ensure that runoff remains well-distibuted as it passes through thea buffer.

The table below applies to a buffer with slopes ranging from 0 to 8%. For a buffer with slopes between 9% and 15%, the indicated berm length ~~should~~must be increased by 20%.

NOTE: The following tables were developed using a 1.25 inch, 24 hour storm of type III distribution, giving a maximum unit flow rate of less than 0.009 cfs per foot.

Required berm and flow length of buffer with 0–8% slope and a stone bermed level lip spreader.

		~~Berm length for a forested buffer (feet)~~		~~Berm length for a meadow buffer (feet)~~	
Hydrologic Soil Group	**Length of flow path through buffer (feet)**	**Berm length for a forested buffer (feet)**		**Berm length for a meadow buffer (feet)**	
		Per acre of impervious area	**Per acre of lawn**	**Per acre of impervious area**	**Per acre of lawn**
	~~75~~	~~75~~	~~25~~	~~125~~	~~35~~
Soil Group A	75	75	25	125	35
	100	65	20	75	25
	150	50	15	60	20
	~~75~~	~~100~~	~~30~~	~~150~~	~~45~~
Soil Group B	75	100	30	150	45
	100	80	25	100	30
	150	65	20	75	25
	~~75~~	~~125~~	~~35~~	~~150~~	~~45~~
Soil Group C sandy loam or loamy sand	75	125	35	150	45
	100	100	30	125	35
	150	75	25	100	30
	~~100~~	~~150~~	~~45~~	~~200~~	~~60~~
Soil Group C, silt loam, clay loam or silty clay loam	100	150	45	200	60
	150	100	30	150	45

Soil Group D, non-wetland	150	150	45	200	60
Soil Group D, non-wetland	150	150	45	200	60

4. Design specifications and sizing tables for a buffer adjacent to the down hill side of a road. A buffer adjacent to the down hill side of a road may only be used when thea buffer is located such that the runoff from the road surface and shoulder sheets immediately into thea buffer. Required buffer design and sizing for this type of buffer does not vary with soil type or slope, except that a buffer meeting this standard is not allowed on soils identified as wetland soils or on natural slopes in excess of 20%. Sizing depends on the vegetative cover type of thea buffer and the number of travel lanes draining to thea buffer as indicated in the following table.

	Length of flow path for a forested buffer (feet)	**Length of flow path for a meadow buffer (feet)**
One travel lane draining to buffer	35	50
One travel lane draining to buffer	35	50
Two travel lanes draining to buffer	55	80
Two travel lanes draining to buffer	55	80

The inslope of the road bed may be included as part of a meadow buffer only if it is designed and constructed to allow infiltration. Design and construction to allow infiltration includes, but is not limited to, the inslope fill materialby having slopes no steeper than 3:1; loaming and seeding to meadow grasses; and maintaining thea buffer area as a meadow buffer. Information supporting each of these requirements must be submitted to the department.

5. Design specifications and sizing tables for a ditch turn-out buffer. A ditch turn-out buffer may only be used when runoff from a road ditch is diverted to a 20-foot stone bermed level lip spreader that distributes runoff into thea buffer. No areas other than the road surface, road shoulder, road ditch, and ditch back slopes may be directed to the stone bermed level lip spreader.

(a) Stone berm specifications. The stone berm to which the ditch turn-out delivers the runoff must be at least 20 feet in length and must be constructed along the contour. It must be at least one- foot high and two feet across the top with 2:1 side slopes. Stone for the berm must consist of sound durable rock that will not disintegrate by exposure to water or weather. Fieldstone, rough quarried stone, blasted ledge rock or tailings may be used. The rock must be well-graded with a median size of approximately 3 inches and a maximum size of 6 inches.

(b) Buffer sizing. The required size of ~~the~~a buffer area below the stone bermed level lip spreader varies with the type of soil in ~~the~~a buffer area, the slope of ~~the~~a buffer, the length of road ditch draining to ~~the~~a buffer and the vegatitive cover type within ~~the~~a buffer. A buffer meeting this standard is not allowed on Hydrologic Soil Group D soils or on slopes in excess of 15%. The following table indicates the required length of the flow path through ~~the~~a buffer for various vegetative covers and ditch lengths. The tables below apply to a buffer with slopes ranging from 0 to 8%. For a buffer with slopes between 9% and 15%, the indicated length of flow path should be increased by 20%. If two travel lanes drain to the ditch, as in the case of a super elevated road, the length of flow path indicated for 400 feet of road must be used, but no more than 250 feet of ditch ~~must~~may drain to each turn-out.

Required length of flow path per length of road or ditch draining to a buffer.

~~Hydrologic soil group of soil in buffer~~	~~Length of road or ditch draining to the buffer (feet)~~	~~Length of flow path for a forested buffer (feet)~~	~~Length of flow path for a meadow buffer (feet)~~
Hydrologic soil group of soil in buffer	**Length of road or ditch draining to a buffer (feet)**	**Length of flow path for a forested buffer (feet)**	**Length of flow path for a meadow buffer (feet)**
A	200	50	70
	300	50	85
	400	60	100
B	200	50	70
	300	50	85
	400	60	100
C Loamy Sand or Sandy Loam	200	60	100
	300	75	120
	400	100	Not applicable
	~~200~~	~~75~~	~~120~~
C Silt Loam, Clay Loam, or Silty Clay Loam	200	75	120
	300	100	Not applicable
~~D Non-wetland~~	~~Not applicable~~	~~Not applicable~~	~~Not applicable~~
D Non-wetland	200	100	150

6. Design specifications and sizing tables for a buffer adjacent to a residential lot; developed area with less than 10% imperviousness, where the flow path over the portion of the developed area for which treatment is being credited does not exceed 150 feet; or an impervious area where the flow path across the impervious area does ~~6. Design specifications and sizing tables for a buffer adjacent to residential, largely pervious or small impervious areas.~~ ~~Design specifications and sizing tables for a buffer adjacent to residential, largely pervious or small impervious areas are~~ not exceed 100 feet. The design specifications and sizing tables below may only be used when a buffer is located immediately adjacent to the downhill side of a developed area, and where the topography and structures within the developed area do not cause any significant concentration of runoff.

This design is appropriate for residential lots and other mostly pervious areas with relatively uniform topography and for small impervious areas. This design is not appropriate for treating large impervious ~~areas, because~~areas because, even if pavement is graded evenly, it is likely that some concentration of runoff will occur as the stormwater travels across large areas of pavement. For large areas of pavement where the average path of flow across the pavement exceeds 100 feet, or where runoff will not be evenly distributed across the downhill edge of the pavement, a stone bermed level

lip spreader must be used and the berm and buffer must be sized according to the specifications in section CSection 3 above.

The table below indicates the required minimum length of the flow path through thea buffer for various soil types and vegatative cover types. Length of flow paths defined in this table apply to buffers with slopes between 0 and 8 %. For buffers with slopes between 9% and 15%, the indicated length of flow path shouldmust be increased by 20%. A buffer meeting this standard is not allowed onon slopes in excess of 15% or Hydrologic Soil Group D soils except that a forested buffer is allowed if the D soils in thea buffer are not wetland soils. This type of bufferBuffers described by this section must be located downhill of the entire developed area for which it is providing stormwater treatment, such that all runoff from the entire developed area has a flow path through thea buffer at least as long as the required length of flow path.

Required minimum length of the flow path through thea buffer for various soil types and vegatativevegetative cover types.

Hydrologic soil group of soil in buffer	Length of flow path for a forested buffer (feet)	Length of flow path for a meadow buffer (feet)
A	45	75
A	45	75
B	60	85
C **Loamy Sand or Sandy Loam**	75	100
C Silt Loam, Clay Loam, or Silty Clay Loam	100	150
C **Silt Loam, Clay Loam, or Silty Clay Loam**	100	150
D Non-wetland	150	Not applicable
D **Non-wetland**	150	Not applicable

APPENDIX G. Suggested templates for deed restrictions and conservation easements for use under the Stormwater Management Law

~~(a) Wooded~~1. Forested buffer, limited disturbance

DECLARATION OF RESTRICTIONS ~~(Wooded~~(Forested Buffer, Limited Disturbance)

THIS DECLARATION OF RESTRICTIONS is made this _____day of _____, 20___, by ~~,~~ _____, _____, _____, _____
(name) (street address)
~~, _____ County,~~ _____, _____ County, Maine, _____, (herein referred to as the
(city or town) (county) (zipcode)
"Declarant"), pursuant to a permit received from the Maine Department of Environmental Protection under the Stormwater Management Law, to preserve a buffer area on a parcel of land near ~~,~~ _____, _____ .
(road name) (known feature and/or town)

WHEREAS, the Declarant holds title to certain real property situated in _____, Maine
(town)
described in a deed ~~from _____ to _____ dated~~from _____ to _____dated
(name) (name of Declarant)
_____, 20____, and recorded in Book ____ Page ____ at the _____County Registry of Deeds, herein referred to as the "property"; and

WHEREAS, Declarant desires to place certain restrictions, under the terms and conditions herein, over a portion of said real property (hereinafter referred to as the "Restricted Buffer") described as follows: (Note: Insert description of restricted buffer area location here)

WHEREAS, pursuant to the Stormwater Management Law, 38 M.R.S.A. Section 420-D and Chapter 500 of rules promulgated by the Maine Board of Environmental Protection ("Stormwater Management Rules"), Declarant has agreed to impose certain restrictions on the Restricted Buffer Area as more particularly set forth herein and has agreed that these restrictions may be enforced by the Maine Department of Environmental Protection or any successor (hereinafter the "MDEP"),

NOW, THEREFORE, the Declarant hereby declares that the Restricted Buffer Area is and shall forever be held, transferred, sold, conveyed, occupied and maintained subject to the conditions and restrictions set forth herein. The Restrictions shall run with the Restricted Buffer Area and shall be binding on all parties having any right, title or interest in and to the Restricted Buffer Area, or any portion thereof, and their heirs, personal representatives, successors, and assigns. Any present or future owner or occupant of the Restricted Buffer Area or any portion thereof, by the acceptance of a deed of conveyance of all or part of the Covenant Area or an instrument conveying any interest therein, whether or not the deed or instrument

shall so express, shall be deemed to have accepted the Restricted Buffer Area subject to the Restrictions and shall agree to be bound by, to comply with and to be subject to each and every one of the Restrictions hereinafter set forth.

1. Restrictions on Restricted Buffer Area. Unless the owner of the Restricted Buffer Area, or any successors or assigns, obtains the prior written approval of the MDEP, the Restricted Buffer Area must remain undeveloped in perpetuity. To maintain the ability of the Restricted Buffer Area to filter and absorb stormwater, and to maintain compliance with the Stormwater Management Law and the permit issued thereunder to the Declarant, the use of the Restricted Buffer Area is hereinafter limited as follows.

~~a.~~a. No soil, loam, peat, sand, gravel, concrete, rock or other mineral substance, refuse, trash, vehicle bodies or parts, rubbish, debris, junk waste, pollutants or other fill material may be placed, stored or dumped on the Restricted Buffer Area, nor may the topography of the area be altered or manipulated in any way;

b. Any removal of trees or other vegetation within the Restricted Buffer Area must be limited to the following:

~~(1)~~(i) No purposefully cleared openings may be created and an evenly distributed stand of trees and other vegetation must be maintained. An "evenly distributed stand of trees " is defined as maintaining a minimum rating score of 24 points in any ~~50~~25 foot by 50 foot square (2500 square feet) area, as determined by the following rating scheme:

~~Diameter of tree at 4½ feet above ground level — Points~~
~~2 - 4 inches — 1~~
~~4 - 12 inches — 2~~
~~8 - 12 inches — 4~~
~~>12 inches — 8~~

Diameter of tree at 4½ feet above ground level	**Points**
2 - 4 inches	1
4 - 8 inches	2
8 - 12 inches	4
>12 inches	8

Where existing trees and other vegetation result in a rating score less than 24 points, no trees may be cut or sprayed with biocides except for the normal maintenance of dead, windblown or damaged trees and for pruning of tree branches below a height of 12 feet provided two thirds of the tree's canopy is maintained;

~~(2)~~(ii) No undergrowth, ground cover vegetation, leaf litter, organic duff layer or mineral soil may be disturbed except that one winding path, that is no wider than six feet and that does not provide a downhill channel for runoff, is allowed through the area;

c. No building or other temporary or permanent structure may be constructed, placed or permitted to remain on the Restricted Buffer Area, except for a sign, utility pole or fence;

d. No trucks, cars, dirt bikes, ATVs, bulldozers, backhoes, or other motorized vehicles or mechanical equipment may be permitted on the Restricted Buffer Area;

e. Any level lip spreader directing flow to the Restricted Buffer Area must be regularly inspected and adequately maintained to preserve the function of the level spreader.

Any activity on or use of the Restricted Buffer Area inconsistent with the purpose of these Restrictions is prohibited. Any future alterations or changes in use of the Restricted Buffer Area must receive prior approval in writing from the MDEP. The MDEP may approve such alterations and changes in use if such alterations and uses do not impede the stormwater control and treatment capability of the Restricted Buffer Area or if adequate and appropriate alternative means of stormwater control and treatment are provided.

2. Enforcement. The MDEP may enforce any of the Restrictions set forth in Section 1 above.

3. Binding Effect. The restrictions set forth herein shall be binding on any present or future owner of the Restricted Buffer Area. If the Restricted Buffer Area is at any time owned by more than one owner, each owner shall be bound by the foregoing restrictions to the extent that any of the Restricted Buffer Area is included within such owner's property.

4. Amendment. Any provision contained in this Declaration may be amended or revoked only by the recording of a written instrument or instruments specifying the amendment or the revocation signed by the owner or owners of the Restricted Buffer Area and by the MDEP.

5. Effective Provisions of Declaration. Each provision of this Declaration, and any agreement, promise, covenant and undertaking to comply with each provision of this Declaration, shall be deemed a land use restriction running with the land as a burden and upon the title to the Restricted Buffer Area.

6. Severability. Invalidity or unenforceability of any provision of this Declaration in whole or in part shall not affect the validity or enforceability of any other provision or any valid and enforceable part of a provision of this Declaration.

7. Governing Law. This Declaration shall be governed by and interpreted in accordance with the laws of the State of Maine.

(NAME)

_____

STATE OF MAINE

~~, _____ _____, 20__.~~
~~(County)~~

_____ County, _____, 20__.
(County) (date)

Personally appeared before me the above named _____, who swore to the truth of the foregoing to the best of (his/her) knowledge, information and belief and acknowledged the foregoing instrument to be (his/her) free act and deed.

Notary Public

Notary Public

B. Wooded2. Forested buffer, no disturbance

DECLARATION OF RESTRICTIONS (WoodedForested Buffer, No Disturbance)

THIS DECLARATION OF RESTRICTIONS is made this day of day of _____, 20___, by _____, _____ , _____ (name) (street address) _____, _____ County, _____, _____ County, Maine, _____, (herein referred to as the (city or town) (county) (zipcode) "Declarant", pursuant to a permit received from the Maine Department of Environmental Protection under the Stormwater Management Law, to preserve a buffer area on a parcel of land near _____, _____ . (road name) (known feature and/or town)

WHEREAS, the Declarant holds title to certain real property situated in _____, Maine (town) described in a deed from to _____ _____ to _____, dated (name) (name of Declarant) _____, 20____, and recorded in Book ____ Page ____ at the _____County Registry of Deeds, herein referred to as the "property"; and

WHEREAS, Declarant desires to place certain restrictions, under the terms and conditions herein, over a portion of said real property (hereinafter referred to as the "Restricted Buffer") described as follows: (Note: Insert description of restricted buffer location here)

WHEREAS, pursuant to the Stormwater Management Law, 38 M.R.S.A. Section 420-D and Chapter 500 of rules promulgated by the Maine Board of Environmental Protection ("Stormwater Management Rules"), Declarant has agreed to impose certain restrictions on the Restricted Buffer Area as more particularly set forth herein and has agreed that these restrictions may be enforced by the Maine Department of Environmental Protection or any successor (hereinafter the "MDEP"),

NOW, THEREFORE, the Declarant hereby declares that the Restricted Buffer Area is and shall forever be held, transferred, sold, conveyed, occupied and maintained subject to the conditions and restrictions set forth herein. The Restrictions shall run with the Restricted Buffer Area and shall be binding on all parties having any right, title or interest in and to the Restricted Buffer Area, or any portion thereof, and their

heirs, personal representatives, successors, and assigns. Any present or future owner or occupant of the Restricted Buffer Area or any portion thereof, by the acceptance of a deed of conveyance of all or part of the Covenant Area or an instrument conveying any interest therein, whether or not the deed or instrument shall so express, shall be deemed to have accepted the Restricted Buffer Area subject to the Restrictions and shall agree to be bound by, to comply with and to be subject to each and every one of the Restrictions hereinafter set forth.

1. Restrictions on Restricted Buffer Area. Unless the owner of the Restricted Buffer Area, or any successors or assigns, obtains the prior written approval of the MDEP, the Restricted Buffer Area must remain undeveloped in perpetuity. To maintain the ability of the Restricted Buffer Area to filter and absorb stormwater, and to maintain compliance with the Stormwater Management Law and the permit issued thereunder to the Declarant, the use of the Restricted Buffer Area is hereinafter limited as follows.

a. No soil, loam, peat, sand, gravel, concrete, rock or other mineral substance, refuse, trash, vehicle bodies or parts, rubbish, debris, junk waste, pollutants or other fill material will be placed, stored or dumped on the Restricted Buffer Area, nor shall the topography of the area be altered or manipulated in any way;

b. No trees may be cut or sprayed with biocides except for the normal maintenance of dead, windblown or damaged trees and for pruning of tree branches below a height of 12 feet provided two thirds of the tree's canopy is maintained;

c. No undergrowth, ground cover vegetation, leaf litter, organic duff layer or mineral soil may be disturbed except that one winding path, that is no wider than six feet and that does not provide a downhill channel for runoff, is allowed through the area;

d. No building or other temporary or permanent structure may be constructed, placed or permitted to remain on the Restricted Buffer Area, except for a sign, utility pole or fence;

e. No trucks, cars, dirt bikes, ATVs, bulldozers, backhoes, or other motorized vehicles or mechanical equipment may be permitted on the Restricted Buffer Area;

f. Any level lip spreader directing flow to the Restricted Buffer Area must be regularly inspected and adequately maintained to preserve the function of the level spreader.

Any activity on or use of the Restricted Buffer Area inconsistent with the purpose of these Restrictions is prohibited. Any future alterations or changes in use of the Restricted Buffer Area must receive prior approval in writing from the MDEP. The MDEP may approve such alterations and changes in use if such alterations and uses do not impede the stormwater control and treatment capability of the Restricted Buffer Area or if adequate and appropriate alternative means of stormwater control and treatment are provided.

2. Enforcement. The MDEP may enforce any of the Restrictions set forth in Section 1 above.

3. Binding Effect. The restrictions set forth herein shall be binding on any present or future owner of the Restricted Buffer Area. If the Restricted Buffer Area is at any time owned by more than one owner, each owner shall be bound by the foregoing restrictions to the extent that any of the Restricted Buffer Area is included within such owner's property.

4. Amendment. Any provision contained in this Declaration may be amended or revoked only by the recording of a written instrument or instruments specifying the amendment or the revocation signed by the owner or owners of the Restricted Buffer Area and by the MDEP.

5. Effective Provisions of Declaration. Each provision of this Declaration, and any agreement, promise, covenant and undertaking to comply with each provision of this Declaration, shall be deemed a land use restriction running with the land as a burden and upon the title to the Restricted Buffer Area.

6. Severability. Invalidity or unenforceability of any provision of this Declaration in whole or in part shall not affect the validity or enforceability of any other provision or any valid and enforceable part of a provision of this Declaration.

7. Governing Law. This Declaration shall be governed by and interpreted in accordance with the laws of the State of Maine.

~~(NAME)~~

_____

(NAME)

~~STATE OF MAINE~~

~~_____, _____~~,STATE OF MAINE,
_____County, dated _____, 20__.
(County)

Personally appeared before me the above named _____, who swore to the truth of the foregoing to the best of (his/her) knowledge, information and belief and acknowledged the foregoing instrument to be (his/her) free act and deed.

_____
Notary Public

_____

C. Non-wooded3 . Meadow buffer

DECLARATION OF RESTRICTIONS (Non-Wooded Meadow Buffer)

THIS DECLARATION OF RESTRICTIONS is made this day of _____ day of _____, 20___, by , _____, _____
(name) (street address)
, _____ County, Maine, _____, _____, _____ County, Maine, _____, (herein referred to as the
(city or town) (county) (zipcode)
"Declarant"), pursuant to a permit received from the Maine Department of Environmental Protection under the Stormwater Management Law, to preserve a buffer area on a parcel of land near _____, _____, _____ .
(road name) _____(known feature and/or town)

WHEREAS, the Declarant holds title to certain real property situated in _____, Maine
(town)
described in a deed from _____ to from _____ to _____, dated
(name) (name of Declarant)
_____, 20____, and recorded in Book ____ Page ____ at the _____County Registry of Deeds, herein referred to as the "property"; and

WHEREAS, Declarant desires to place certain restrictions, under the terms and conditions herein, over a portion of said real property (hereinafter referred to as the "Restricted Buffer") described as follows: (Note: Insert description of restricted buffer location here)

WHEREAS, pursuant to the Stormwater Management Law, 38 M.R.S.A. Section 420-D and Chapter 500 of rules promulgated by the Maine Board of Environmental Protection ("Stormwater Management Rules"), Declarant has agreed to impose certain restrictions on the Restricted Buffer Area as more particularly set forth herein and has agreed that these restrictions may be enforced by the Maine Department of Environmental Protection or any successor (hereinafter the "MDEP"),

NOW, THEREFORE, the Declarant hereby declares that the Restricted Buffer Area is and shall forever be held, transferred, sold, conveyed, occupied and maintained subject to the conditions and restrictions set forth herein. The Restrictions shall run with the Restricted Buffer Area and shall be binding on all parties having any right, title or interest in and to the Restricted Buffer Area, or any portion thereof, and their heirs, personal representatives, successors, and assigns. Any present or future owner or occupant of the

Restricted Buffer Area or any portion thereof, by the acceptance of a deed of conveyance of all or part of the Covenant Area or an instrument conveying any interest therein, whether or not the deed or instrument shall so express, shall be deemed to have accepted the Restricted Buffer Area subject to the Restrictions and shall agree to be bound by, to comply with and to be subject to each and every one of the Restrictions hereinafter set forth.

1. Restrictions on Restricted Buffer Area. Unless the owner of the Restricted Buffer Area, or any successors or assigns, obtains the prior written approval of the MDEP, the Restricted Buffer Area must remain undeveloped in perpetuity. To maintain the ability of the Restricted Buffer Area to filter and absorb stormwater, and to maintain compliance with the Stormwater Management Law and the permit issued thereunder to the Declarant, the use of the Restricted Buffer Area is hereinafter limited as follows.

   a. No soil, loam, peat, sand, gravel, concrete, rock or other mineral substance, refuse, trash, vehicle bodies or parts, rubbish, debris, junk waste, pollutants or other fill material will be placed, stored or dumped on the Restricted Buffer Area, nor may the topography or the natural mineral soil of the area be altered or manipulated in any way;

   b. A dense cover of grassy vegetation must be maintained over the Restricted Buffer Area, except that shrubs, trees and other woody vegetation may also be planted or allowed to grow in the area. The Restricted Buffer Area may not be maintained as a lawn or used as a pasture. If vegetation in the Restricted Buffer Area is mowed, it may be mown no more than ~~three~~two times per year~~, to a height of no less than 6 inches~~.

   c. No building or other temporary or permanent structure may be constructed, placed or permitted to remain on the Restricted Buffer Area, except for a sign, utility pole or fence;

   d. No trucks, cars, dirt bikes, ATVs, bulldozers, backhoes, or other motorized vehicles or mechanical equipment may be permitted on the Restricted Buffer Area, except for vehicles used in mowing;

   e. Any level lip spreader directing flow to the Restricted Buffer Area must be regularly inspected and adequately maintained to preserve the function of the level spreader.

   Any activity on or use of the Restricted Buffer Area inconsistent with the purpose of these Restrictions is prohibited. Any future alterations or changes in use of the Restricted Buffer Area must receive prior approval in writing from the MDEP. The MDEP may approve such alterations and changes in use if such alterations and uses do not impede the stormwater control and treatment capability of the Restricted Buffer Area or if adequate and appropriate alternative means of stormwater control and treatment are provided.

2. Enforcement. The MDEP may enforce any of the Restrictions set forth in Section 1 above.

3. Binding Effect. The restrictions set forth herein shall be binding on any present or future owner of the Restricted Buffer Area. If the Restricted Buffer Area is at any time owned by more than one owner, each owner shall be bound by the foregoing restrictions to the extent that any of the Restricted Buffer Area is included within such owner's property.

4. Amendment. Any provision contained in this Declaration may be amended or revoked only by the recording of a written instrument or instruments specifying the amendment or the revocation signed by the owner or owners of the Restricted Buffer Area and by the MDEP.

5. Effective Provisions of Declaration. Each provision of this Declaration, and any agreement, promise, covenant and undertaking to comply with each provision of this Declaration, shall be deemed a land use restriction running with the land as a burden and upon the title to the Restricted Buffer Area.

6. Severability. Invalidity or unenforceability of any provision of this Declaration in whole or in part shall not affect the validity or enforceability of any other provision or any valid and enforceable part of a provision of this Declaration.

7. Governing Law. This Declaration shall be governed by and interpreted in accordance with the laws of the State of Maine.

(NAME)

_____

STATE OF MAINE

_____, _____,
20__. _____
(NAME)

STATE OF MAINE, _____, County, dated _____, 20__ .
(County)

Personally appeared before me the above named _____, who swore to the truth of the foregoing to the best of (his/her) knowledge, information and belief and acknowledged the foregoing instrument to be (his/her) free act and deed.

_____

_____
Notary Public

_____ _____

AUTHORITY: 38 M.R.S.A. §§ 341-D, ~~420-D, 484, and 413~~413, 420-D, and 484

EFFECTIVE DATE: December 31, 1997
REPEALED AND REPLACED, EFFECTIVE DATE: